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Report of the Inter-sessional Ad Hoc Working Group on Strategic Approaches to Freshwater Management

(New York, 23-27 February 1998)

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I. Introduction

1. The Inter-Sessional Ad Hoc Working Group on Strategic Approaches to Freshwater Management met (New York, 23-27 February 1998) in preparation for consideration of the issue of freshwater management by the Commission on Sustainable Development at its sixth session (New York, 20 April - 1 May 1998). The discussions were based on the recommendations and proposals for action contained in two reports of the Secretary-General (E/CN.17/1998/2 and Add. 1 and E/CN.17/1998/3) and in the report of the Expert Group Meeting on Strategic Approaches to Freshwater Management (Harare, Zimbabwe, 27-30 January 1998) (E/CN.17/1998/11). The discussions also benefited from national presentations by the Netherlands and the Russian Federation, describing their efforts in achieving integrated freshwater development and management.

2. The participants noted the forthcoming Ministerial Meeting on Water Resources and Sustainable Development (Paris, France, 19-21 March 1998) which is expected to provide additional opportunity for further consideration of various aspects of strategic approaches to freshwater management in preparation for the sixth session of the Commission, in particular the need for improving knowledge of water resources and water users; promoting human resources and institutional capacity-building; and identifying appropriate financial resources. Similarly, a contribution to the sixth session of the Commission is expected from an international forum, Global Water Politics: Cooperation for Transboundary Water Management (Bonn, Germany, 3-5 March 1998).

3. The outcome of the Working Group meeting is not a negotiated text, although its contents were thoroughly discussed. In accordance with the expert nature of the Working Group and the functions assigned to it, the report focuses on key issues and conclusions and suggests elements and policy options for further consideration and negotiation during the sixth session of the Commission on Sustainable Development.

II. Background

4. Water resources are essential for satisfying basic human needs, health and food production, the restoration and maintenance of ecosystems, and for social and economic development in general. Agriculture accounts for the major part of global freshwater use. It is imperative that water resources development, management and protection should be planned in an integrated manner, taking into account both short- and long-term needs.

5. The priority to be accorded to the social dimension of freshwater management is of fundamental importance. This should be reflected in an integrated approach to freshwater in order to be coherent with the objective of achieving sustainable development that is truly people-centred.

6. The objectives of sustainable development and the links among its three components – economic development, social development and environmental protection – were clearly articulated in Agenda 21 and the Rio Declaration. The specific decisions and policy recommendations concerning freshwater development, management and use in chapter 18 of Agenda 21 and the identification of the seven key programme areas contained in that chapter continue to be a basis for action.

7. There is evidence of progress in improving some aspects of freshwater resource management since 1992. Marked improvements in water quality have occurred in a number of river basins and groundwater aquifers where pressures for action have been strong. However, while many lessons have been learned, overall progress has been neither sufficient nor comprehensive enough to reduce general trends of increasing water shortages, deteriorating water quality and growing stress on freshwater ecosystems. Water need not become a limiting factor for sustainable development and human welfare. A series of potential crises can be averted if vigorous action is taken now towards an integrated approach to freshwater resource development, management and use.

8. Competition for limited freshwater increasingly occurs between agricultural, urban, industrial and environmental uses. In adopting the Programme for the Further Implementation of Agenda 21,[1] in particular its paragraph 34, the General Assembly articulated the multiple dilemmas and challenges associated with the management of freshwater. They recognized, *inter alia*, the urgent need to formulate and implement national policies of integrated watershed management in a fully participatory manner aimed at achieving and integrating economic, social and environmental objectives of sustainable development. In addition to agreeing to those strategic principles, the General Assembly also recognized an urgent need to strengthen international cooperation to support local and national action, in particular in the fields of environment and development, safe water supply and sanitation, food security and agricultural production, and flood and drought control, through efforts in areas such as information exchange, capacity-building, technology transfer and financing.

9. In accordance with the Programme for the Further Implementation of Agenda 21, Governments called for a dialogue under the aegis of the Commission on Sustainable Development, beginning at its sixth session, aimed at

building a consensus on the necessary action and, in particular, the means of implementation and tangible results, in order to consider initiating a strategic approach for the implementation of all aspects of the sustainable use of freshwater for social and economic purposes, including, *inter alia*, safe drinking water and sanitation, water for irrigation, recycling, and wastewater management, and the important role freshwater plays in natural ecosystems. That intergovernmental process will be fully fruitful only if there is a proven commitment by the international community to the provision of new and additional financial resources for the goals of the initiative.

III. Key issues and challenges

10. The process called for in the Programme for the Further Implementation of Agenda 21 should focus on fostering and supporting national and international action in those areas where goals and objectives have been defined; identification of existing gaps and emerging issues; building global consensus where further understanding is required; and promoting greater coordination in approaches by the United Nations and relevant international institutions, particularly in support of national implementation policy and development.

11. Numerous gaps can be identified in the path towards integrated water management which need to be addressed by Governments with support from the international community. Areas that require further attention include, among others: awareness of the scope and function of surface and groundwater resources; the need for human resource development and participatory approaches, notably including women; the role of ecosystems in the provision of goods and services; balancing structural and non-structural approaches; explicit linkages with socio-economic development, including sound economic policies, for equitable and efficient freshwater allocation and use; improved sanitation and waste-water treatment; conserving the biological diversity of freshwater ecosystems; understanding hydrology and the capacity to assess the availability and variability of water resources; and the mobilization of domestic and international financial resources. Strategic and integrated actions are still needed in order to adapt to ever changing social and environmental circumstances and to address fundamental concerns for combating poverty, ensuring adequate provision of public health, food security and energy, and better to protect the environment.

12. International cooperation and action needs to address effectively the above issues, building on existing consensus for the successful implementation of integrated water resource development and management.

13. The implementation of integrated water development and management strategies requires action at all levels. However, most decisions and actions related to integrated water management need to take place at the local and national levels. Those actions should be closely related to other areas of natural resource management, including land, forestry and mountain development. Effective integrated water resource management should incorporate approaches dealing with river basins, catchments, watersheds and ecosystems.

14. There is need to ensure that local and national management plans are in a position to bring about productive and sustainable interactions between human activities and the ecological functioning of freshwater systems. There is also need to minimize impacts from human activities on coastal areas, estuarine and marine environments, and in mountainous areas, and to reduce potential losses from droughts and floods, erosion, desertification and natural disasters. Furthermore, pollution prevention, sanitation and the treatment of waste water need to be addressed.

15. Riparian States are encouraged to cooperate on matters related to international watercourses. This important issue requires further consideration by the Commission and in other relevant forums.

IV. Actions and means of implementation

16. Governments are invited to intensify efforts to develop local and national integrated water resource development and management programmes and policies, as recommended in Agenda 21. Governments at the appropriate level should set and publish target dates for the adoption or updating of local or national action programmes for implementing such programmes. The implementation of local or national programmes should form an important part of the local Agenda 21 approach.

17. In formulating and implementing integrated water resource management policies and programmes, there is need to take into account actions to implement relevant conventions in force, in particular conventions on biological diversity, desertification, climate change, and wetlands and the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). In addition, consideration should be given, as appropriate, to relevant recommendations and/or programmes of action emanating from a number of major international conferences and events, including the Global Programme of Action for the

Sustainable Development of Small Island Developing States,[2] the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities,[3] the Mar del Plata Action Plan,[4] the International Drinking Water Supply and Sanitation Decade,[5] the International Conference on Water and the Environment: Development Issues for the 21st Century (Dublin, 1992);[6] the World Summit for Social Development;[7] the Fourth World Conference on Women;[8] the United Nations Conference on Human Settlements (Habitat II);[9] and the World Food Summit.[10] Furthermore, in formulating such policies, Governments are called upon to address the need for achieving universal access to water supply and sanitation, with poverty eradication being one of the means, taking into account, in particular, chapter 18 of Agenda 21, the Global Consultation on Safe Water and Sanitation for the 1990s (New Delhi, 1990)[11] and the recommendations of the 1994 Noordwijk Action Programme on Drinking Water and Environmental Sanitation.[12]

18. The holding of the Expert Group Meeting on Strategic Approaches to Freshwater Management and its report are noted with appreciation. In formulating and implementing policies and programmes, Governments are invited to consider the key recommendations of the report.

A. Information for decision-making

19. Governments are encouraged to establish and maintain effective information and monitoring networks and further promote the exchange and dissemination of information – including related socio-economic and environmental data, gender differentiated, where appropriate – needed for policy formulation, planning and investment decisions and operational management of freshwater resources, and encourage the harmonization of data collection at the basin/aquifer level. Public access to this information should be facilitated. This includes the need to improve the understanding of hydrology (surface and groundwater) and the function of ecosystems and to strengthen relevant information systems better to foresee and manage resource uncertainty. Such efforts on the part of developing countries, particularly the least developed countries, require support from the international community.

20. Governments are encouraged to implement and monitor national water-related indicators of progress in achieving integrated water resource management, including water quality and quantity objectives, taking into account ongoing work of the Commission on Sustainable Development on indicators of sustainable development.

21. In addition, in accordance with their policies, priorities and resources, Governments may find it useful to carry out national water quality and quantity inventories for surface water and groundwater, including the identification of gaps in regard of available information.

22. Governments are invited to establish or strengthen mechanisms for consultations on drought and flood preparedness and early warning systems and mitigation plans at the local and national levels. Governments are encouraged to consider the establishment of systems – which may take the form of emergency funds, where appropriate – to ensure that individuals and communities can be compensated for the damage that they suffer from such extreme events. At the international level, there is, in particular, need to maintain support of these activities at the conclusion of the International Decade on Natural Disaster Reduction.

23. The international community should support national efforts in the areas outlined above. The United Nations system is called upon to play a central role in the development and coordination of relevant data and information networks, strengthen regional and global monitoring systems, carry out periodic global assessments and analyses, and promote the broadest exchange and dissemination of relevant information, in particular to developing countries.

B. Institutions, capacity-building and participation

24. Governments are urged to establish national coordination mechanisms, as already envisaged in the Mar del Plata Action Plan, providing for the involvement of all relevant parts of government and public authorities, in the formulation and implementation of integrated water resource development and management plans and policies. Such mechanisms should also provide for consultation with major groups. This involves the participation of water users and the public in planning, implementing, and evaluating water projects.

25. Governments are invited to take the necessary steps to establish legislative and regulatory frameworks – and to improve such frameworks where they exist – to facilitate integrated water resource management and strategies, including both demand and supply management, taking into account the need to improve capacity to apply and enforce such frameworks. Each Government needs to define its relevant functions and distinguish between those related to standards, regulation-setting and control, on the one hand, and the direct management and provision of services, on the other.

26. In view of the complexity of implementing integrated water resource development and management strategies, Governments should strengthen institutional and human

capacities at the national and local levels. At the local level, this could be done through local Agenda 21 processes, where they exist. Effective water resource management and protection requires appropriate tools for educating and training water management staff and water users at all levels and for ensuring that women and youth have equal access to education and training programmes.

27. Governments are encouraged to establish an enabling environment to facilitate partnerships between public and private sectors and non-governmental organizations, aiming towards improved local capacity to protect water resources, through significant outreach educational programmes and improved public access to information. The pivotal role of women should be reflected in institutional arrangements for the development and management of water resources. There is a need to strengthen the role of women, who should have an equal voice with regard to water resource development and management and the sharing of benefits.

28. In support of national efforts in this field, the international community, in particular the organizations of the United Nations system, should strengthen capacity-building programmes, taking into account the special needs of developing countries, in particular the least developed countries and the specific circumstances of small island developing States, in such areas as training, institutional development and the participation of women.

C. Technology transfer and research cooperation

29. Governments are encouraged to stimulate and remove impediments to research and development cooperation, together with the development of technologies for sustainable water management and use, and to increase efficiency, reduce pollution and promote sustainable agriculture and food production systems. This involves the adaptation and diffusion of new and innovative techniques and technologies, both private and public, and the transfer of technologies to developing countries, *inter alia* on concessional terms, as mutually agreed, taking into account the need to protect intellectual property rights. The use of local and traditional technology and knowledge should be promoted, and South/South cooperation should be encouraged.

30. Governments, industry and international organizations should promote technology transfer and research cooperation to foster sustainable agricultural practices which promote efficient water use and prevent pollution of surface water and groundwater. These technologies should include the improvement of crops grown on marginal sites, erosion control practices, and the adaptation of farming systems. They should also improve water efficiency in both irrigated and rain-fed areas and improve the adaptation and productivity of drought-tolerant crop species. Farmer participation in farm research, irrigation projects and watershed management should be encouraged. Research results and technologies should be available to both small and large producers.

31. In order to help increase the supplies of freshwater, research cooperation and technology transfer to developing countries are desirable in the areas of desalination, brackish water treatment, waste-water treatment and desert dew catchment and in the use of remote-sensing techniques and other relevant modern technologies.

32. Water management provides an opportunity for technology cooperation projects involving partnerships between the public and private sectors. Governments are urged to promote innovative approaches.

33. The Commission on Sustainable Development should call upon all relevant parties to develop and implement best practices and appropriate technologies in the area of water development and management. Codes of conduct, guidelines and other voluntary agreements can enhance the positive role that industry and agriculture can play and should cover the activities of companies operating and investing outside their home countries.

34. Governments are encouraged to make the best use of national, regional and international environmentally sound technology centres.

35. Donor countries and international organizations are urged to intensify their efforts to facilitate their transfer of environmentally sound technologies, including publicly owned technology; to accelerate their technical assistance programmes to developing countries, aimed at facilitating the choice and acquisition of appropriate technologies and their transfer and diffusion; and to promote exchanges of know-how. The United Nations system has an important role to play as a clearing house in putting those in need of assistance in contact with those able to provide it.

D. Financial resources and mechanisms

36. As stated in the Programme for the Further Implementation of Agenda 21, the intergovernmental process on freshwater, under the aegis of the Commission, will be fully fruitful only if there is a proven commitment by the international community for the provision of new and additional financial resources for its goals.

37. New and additional financial resources for developing countries, in particular the least developed countries, will need to be mobilized for the development and management of freshwater resources if the broader aims of sustainable development are to be realized, particularly in relation to poverty eradication. Existing resources currently allocated to the freshwater sector should be used effectively, which should help mobilize additional finance from all sources, both public and private.

38. Official development assistance should complement and focus on programmes aimed at meeting basic human needs, including freshwater development and management, structural reform, protection of ecosystems, sustainable management of resources, and promoting participation and capacity-building. Donors, including multilateral donor institutions, should be ready to continue, or even reinforce, the support for programmes and projects in the water sector which will reduce or eliminate poverty. In addition, donors should persist in trying to meet international development targets. Projects supported by donors need to be capable of becoming financially self-sustaining once the initial investment is complete. Donors should also consider support for the freshwater sector in light of cross-sectoral interests such as desertification and climate change.

39. The private sector represents an important new source of investment in the water sector. Local and national water management systems should therefore be designed in ways that encourage and support public/private partnerships. It is important to ensure that water management systems are organized so that they will be robust and, once established, can support themselves. The introduction of enabling financial framework conditions will be of paramount importance, if private sector finance is to be mobilized.

40. Governments are urged to strengthen consultative mechanisms aimed at improving donor/recipient schemes for the mobilization of financial resources in a well-targeted and predictable manner, based on local and national programmes of action, with a special focus on integrated water resource management which recognizes the needs of vulnerable groups and people living in poverty.

41. All costs must be covered, whether by water users or the public-sector budget, if the provision of water is to be viable. Cost recovery needs to be gradually phased in by water utilities or the public sector, taking into account the specific conditions of each country. Subsidies for specific groups, particularly people living in poverty, are required in some countries. Governments could benefit from sharing experience in this regard.

42. In the light of commitments on resources in relation to water made at the World Summit for Social Development and at the Fourth World Conference on Women, initiatives should be undertaken to help identify and mobilize more resources – human, technical (know-how) and financial – and take into account the 20/20 initiative in accordance with national policies. Resources should be focused on local and national programmes that are consistent with the key issues. A fundamental aim must be to promote the generation of the resources needed for proper water supply, sanitation and water management systems and their efficient and effective deployment. Governments are invited to allocate sufficient public financial resources for the provision of water supply and sanitation to meet basic human needs and for waste-water treatment.

43. Governments, when using economic instruments for guiding the allocation of water, are urged to take into account considerations of environmental requirements, efficiency, transparency and equity, taking into particular account the needs of vulnerable groups and people living in poverty.

44. International financial support will continue to be important, particularly in helping to find ways of removing constraints on the development of local and national water management systems. Existing international financial support arrangements should be reviewed, to see if they can be made more effective in this task. Governments, with the support of the international community, needs to promote and examine the economic, social and environmental values provided by ecosystems and the cost of their degradation.

45. The international community could give consideration to creating a financial mechanism to promote the efforts of developing countries in the development, management, distribution and use of water resources. Such a mechanism could draw upon existing funds and be supported by existing administrative arrangements. The discussion of this proposal should include consideration of the following challenges/issues:

(a) Promoting more effective donor coordination and more effective and creative use of existing resources;

(b) Generation and allocation of new and additional financial resources from all sources;

(c) The inclusion of resources in the form of direct grants and loans in concessional terms;

(d) A quantified resources programme, in accordance with the needs of developing countries;

(e) Resources contributions by industrialized countries and international financial institutions, including regional institutions;

(f) Formulation of financial strategies which include possible partnerships with non-governmental organizations

and the private sector and the promotion of conditions for increased private financial flows;

(g) The strengthening of consultative mechanisms by Governments and the international community aimed at making freshwater a development priority and at improving dialogue between industrialized and developing countries in a well targeted and predictable manner, based on national actions and plans, with a special focus on integrated water resource management that recognizes the needs of vulnerable groups and people living in poverty. This could include exploring the potential of new financial arrangements.

V. Follow-up and assessment

46. Governments are invited to report to the Commission on Sustainable Development in the year 2002 on actions they have undertaken towards the development and implementation of national integrated water resource development management policies. The Secretariat is invited to continue collecting, analysing and disseminating national information, promoting exchanges of such information and developing relevant databases.

47. To facilitate progress at the national level, interested Governments and organizations are strongly encouraged to organize, in support of the work of the Commission, meetings and activities aimed at exchanges of experiences and best practice on specific issues proposed by Governments. Such meetings, *inter alia*, should promote exchanges of information on local and national action programmes and community-based efforts to implement the provisions of Agenda 21 relevant to freshwater, especially advances in integrated water resource and watershed management.

48. The Commission should give consideration to possible specific modalities of an intergovernmental dialogue on freshwater, to take place after its sixth session. The goal would be to take stock of progress achieved at all levels and give further guidance to various activities leading to a more comprehensive review in the year 2002. Possible options include:

(a) Addressing the issue of freshwater during one of the ad hoc inter-sessional groups of the Commission which will meet in 2000;

(b) Consolidating the work and functions of the Committee on Natural Resources into the Committee on Sustainable Development so as to provide the capacity for continuing intergovernmental dialogue on freshwater issues, subject to the outcome of ongoing discussions in the context of follow-up to General Assembly resolution 50/227 on the reform of the Economic and Social Council's subsidiary bodies;

(c) Organizing a special inter-sessional meeting in the year 2000 to be funded through extrabudgetary resources or sponsored by interested Governments.

49. The United Nations system, in support of the intergovernmental dialogue in the Commission, acting through the ACC Subcommittee on Water Resources, and working in collaboration with international institutions outside the system, is invited to elaborate, for consideration by Governments through the Commission, in the year 2000, an international implementation programme containing action-oriented recommendations on ways and means to enhance coordination within the United Nations system to accelerate the implementation of chapter 18 of Agenda 21 which will outline ways and means to encourage international support for national actions. Such recommendations should:

(a) Systematize various objectives identified for the United Nations system in Agenda 21 and other relevant international declarations and programmes of action;

(b) Suggest on the basis of analysis of experience gained in the United Nations system, ways and means to enhance coordination in order to raise the effectiveness of support to the implementation of objectives identified in chapter 18 of Agenda 21;

(c) Suggest practical ways and actions to reach such objectives through various services offered by international institutions, in such areas as capacity-building, infrastructure development, research, policy advice, etc. This should include the implementation of recommendations to the United Nations system contained in the present report (see paras. 23, 28 and 35);

(d) Define effective division of responsibilities and consider ways of increasing efficiency in programme delivery, including the avoidance of unnecessary overlap and duplication, and possibilities for joint programming;

(e) Explore the potential of basin-level arrangements, where appropriate, drawing upon the experience gained in existing regional programmes in the United Nations system;

(f) Identify benchmarks and time-frames for implementation, and necessary actors, both within and outside the United Nations system;

(g) Identify all possible sources of finance for implementation.

50. The United Nations Environment Programme should, in collaboration with other members of the ACC Subcommittee on Freshwater, provide an effective

contribution to the work of the Commission on Sustainable Development and the ACC through the provision of policy, technical and scientific advice on environmental aspects of the sustainable development of freshwater resources. The potential of the Global Environment Monitoring System and other relevant global monitoring networks should be fully utilized.

51. At the country level, the United Nations system – through the United Nations Development Assistance Framework, as appropriate, and the resident coordinator system – must enhance coordinated efforts and programmes in the area of freshwater. Better coordination is needed between the work of United Nations agencies and bilateral donors and international financial institutions. Possibilities should be identified for joint projects and missions.

52. Finally, the organizations of the United Nations, through the ACC Subcommittee on Water Resources, are invited to develop a consolidated guidebook on integrated water resources management, to replace existing sectoral guidelines, and to submit the guidelines to the Commission on Sustainable Development at its session in 2002.

VI. Organizational matters

A. Opening and duration of the session

53. The Inter-Sessional Ad Hoc Working Group on Strategic Approaches to Freshwater Management of the Commission on Sustainable Development met in New York from 23 to 27 February 1998, in accordance with Economic and Social Council resolution 1997/63 of 25 July 1997. The Working Group held 9 meetings (1st to 9th meetings).

54. The meeting was opened by the temporary Chairman, Ms. Marta Inés Galindo (Colombia), Vice-Chairman of the Commission on Sustainable Development.

B. Attendance

55. The session was attended by representatives of 39 States members of the Commission on Sustainable Development. Observers for other States Members of the United Nations, the European Community and representatives of organizations of the United Nations system and observers for intergovernmental and non-governmental organizations also attended. (A list of participants is given in the annex below.)

C. Election of officers

56. At the 1st meeting, on 23 February, the Working Group elected by acclamation, H.E. Mr. Rogatien Biaou (Benin) and Ms. JoAnne DiSano (Australia) as Co-Chairmen.

57. At the same meeting, the Co-Chairmen made introductory statements.

D. Agenda and organization of work

58. At the 1st meeting, on 23 February, the Working Group adopted its provisional agenda, contained in document E/CN.17/ISWG.I/1998/1, and approved its organization of work. The agenda read as follows:

1. Election of officers.
2. Adoption of the agenda and other organizational matters.
3. Strategic approaches to freshwater management.
4. Other matters.
5. Adoption of the report of the Working Group.

59. At the same meeting, the Working Group agreed to invite the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) to attend the session of the Working Group as an intergovernmental organization, with the status of observer.

E. Documentation

60. The Working Group had before it the following documents:

(a) Report of the Secretary-General on strategic approaches to freshwater management (E/CN.17/1998/2);

(b) Report of the Secretary-General on strategic approaches to freshwater management, transmitting the report of the Expert Group Meeting on Strategic Approaches to Freshwater Management (Harare, 27-30 January 1998) (E/CN.17/1998/2/Add.1);

(c) Report of the Secretary-General on activities of the organizations of the United Nations system in the field of freshwater resources (E/CN.17/1998/2);

(d) Letter dated 11 February 1998 from the Permanent Representative of Zimbabwe to the United Nations addressed to the Secretary-General transmitting the report of the Expert Group Meeting on Strategic Approaches

to Freshwater Management, held at Harare, Zimbabwe, from 27 to 30 January 1998 (E/CN.17/1998/11);

(e) Note by the Secretariat on participation of intergovernmental organizations in the work of the Inter-Sessional Ad Hoc Working Group on Strategic Approaches to Freshwater Management (E/CN.17/ISWG.I/1998/L.1);

(f) Report of the High-level Advisory Board on Sustainable Development for the 1997 review of the Rio commitments (E/CN.17/1997/17/Add.1).

F. Adoption of the report of the Working Group

61. At the 9th meeting, on 27 February 1998, the Working Group had before it the draft report (E/CN.17/ISWG.I/1998/L.2), as well as an informal paper.

62. At the same meeting, the Working Group took note of the informal paper and adopted its report.

Notes

[1] Resolution S/19-2.

[2] See *Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April-6 May 1994* (United Nations publication, Sales No. E.94.I.18 and Corr.1 and 2), chap. I, resolution 1, annex II.

[3] See A/51/116, annex II.

[4] See *Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977* (United Nations publication, Sales No. E.77.II.A.12), chap. I.

[5] See General Assembly resolution 35/18.

[6] See A/CONF.115/PC/112, annex II.

[7] See *Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8).

[8] See *Report of the Fourth World Conference on Women, Beijing, 4-15 September 1995* (United Nations publication, Sales No. E.96.IV.13).

[9] See *Report of the United Nations Conference on Human Settlements (Habitat II), Istanbul, 3-14 June 1996*.

[10] See *Report of the World Food Summit, Rome, 13-17 November 1996* (WFS 96/REP), (Rome, 1997).

[11] See A/C.2/45/3.

[12] Adopted at the International Ministerial Conference on Drinking Water and Environmental Sanitation, Noordwijk, Netherlands, 22-23 March 1994. See E/CN.17/1994/12.

Annex

List of participants

Members

Australia: JoAnne DiSano, Ross Walker, Howard Bamsey, Malcolm Forbes, Richard Bomford, Kerry Smith, Volker Aeuckens, Emma Ferguson, Kylie Oakes-Ati, Peter Hoey, Amanda Hawkins

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Intergovernmental organizations

Organization for Economic Cooperation and Development, Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar Convention)

Non-governmental organizations

General consultative status with the Economic and Social Council: Franciscans International, International Chamber of Commerce, International Confederation of Free Trade Unions, World Wide Fund for Nature International

Roster or accredited to the Commission on Sustainable Development: Alliance to End Childhood Lead Poisoning, Alliance of Northern Peoples for Environment and Development, Association of the Bar of the City of New York, Earth Council, Friends of the Earth, Institute for Agriculture and Trade Policy, International Institute for Sustainable Development, Netherlands Committee for IUCN, The Other Economic Summit, United Nations Environment and Development - UK Committee, Women's Environment and Development Organization, World Sustainable Agriculture Association, Zero

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I. Introduction

1. The Inter-sessional Ad Hoc Working Group on Industry and Sustainable Development met (New York, 2-6 March 1998) in preparation for consideration of the issue of industry and sustainable development by the Commission on Sustainable Development at its sixth session (New York, 20 April-1 May 1998). Its discussions were based on the recommendations and proposals for action contained in the relevant reports of the Secretary-General (E/CN.17/1998/4 and Add. 1-3). The Working Group also considered the issue of guidelines for sustainable consumption, in particular the outcome of the Interregional Expert Group Meeting on Consumer Protection and Sustainable Consumption (São Paolo, Brazil, 28-30 January) (E/CN.17/1998/5).

2. The outcome of the Working Group meeting is not a negotiated text, although its contents were thoroughly discussed. In accordance with the expert nature of the Working Group and the functions assigned to it, the present report focuses on key issues and conclusions and suggests elements and policy options for further consideration and negotiation during the sixth session of the Commission on Sustainable Development.

II. Industry and sustainable development

A. Background

3. Agenda 21[1] and the Rio Declaration on Environment and Development[2] provide the fundamental framework for further policy discussion and action on matters related to industry and sustainable development. Although the role of business and industry, as a major group, is specifically addressed in chapter 30, issues related to industry and economic development, consumption and production patterns, social development and environmental protection cut across the entirety of Agenda 21, including its section 4, Means of implementation.

4. Poverty eradication is central to sustainable development strategies, and industry has a key role to play in this respect. Sustainable industrial policy encompasses a variety of interrelated economic, social and environmental objectives, including the encouragement of an open, competitive economy, the creation of productive employment in order to provide sustained increases in household income and social development, and the protection of the natural environment through the efficient use of resources. In order to achieve the objectives of sustainable development, Governments need to integrate economic, social and environmental concerns into their policy and regulatory frameworks, and industry needs to promote sustainable development through sustainable consumption and production and responsible entrepreneurship, in accordance with country-specific conditions.

5. Increasing industrialization and per capita levels of production have led to a corresponding increase in the impact of industrial activities on the environment and health. At the local level, industrial emissions contribute to urban air pollution and the contamination of soil and water. At the regional level, the impact of such emissions includes acid rain, water contamination and the contamination of coastal zones. The major impact at the global level includes climate change, depletion of the ozone layer and the loss of biological diversity. These environmental challenges will be more and more shaped by growing resource and energy demands, and the issues (like climate change) cannot be dealt with by end-of-pipe regulation alone. Hence, the promotion of cleaner production and improvements in environmental performance and environmentally sound technologies and products are becoming increasingly important. Some businesses and industries have taken significant first steps to develop, implement and improve their policies and practices to promote sustainable development. The implementation of environmental management systems and practices in industry are, therefore, important. The way in which companies are able to respond efficiently and effectively to these challenges is seen as a cornerstone in the necessary innovation process.

B. General recommendations

6. Further action is needed to adjust policy approaches that have unintended adverse environmental or social effects and to establish a policy framework that fosters sustainability, including encouragement to companies of all sizes and in all sectors to integrate sustainable development into their business strategies, planning and operations. At the macroeconomic level environmental protection and "eco-management" can contribute to the modernization of the economy and to creating and securing jobs in industry.

7. Governments are encouraged to develop enabling policy environments and undertake reforms that provide more consistent economic and other incentives and disincentives to make markets work better and encourage business and industry to move faster towards sustainable

development. Some policy instruments used in developed countries might be useful for the more advanced developing countries. For others at the early stages of industrialization, there are opportunities to integrate sustainability from the outset. For developing countries, particularly the least developed countries, further efforts, supported by international cooperation, will need to be made in order to encourage capacity-building and investment in sustainable industrial development.

8. Since the role of the private sector has expanded in most economies, effective sustainable development policies require constructive dialogue and partnerships between Government at all levels, industry, trade unions and civil society, including women's organizations. There is need to build and extend this dialogue. There are many good examples of the new partnerships that are required. They include partnerships between government and industry to tackle global challenges like climate change, partnerships between companies in developed and developing countries to create and spread cleaner technologies and improved environmental management, partnerships at national and local levels between companies and all of their stakeholders, and increased dialogue between industry and the United Nations system.

9. Consistent with Agenda 21, the development and further elaboration of national policies and strategies and integrated approaches, particularly in industrialized countries, are needed to encourage changes in unsustainable consumption and production patterns, while strengthening, as appropriate, international approaches and policies that promote sustainable consumption patterns on the basis of the principle of common but differentiated responsibilities, applying the "polluter pays" principle and encouraging producer responsibility and greater consumer awareness.

10. Governments, industry and organizations of civil society should, as appropriate, use the media, advertising, marketing and other means to promote greater producer and consumer awareness of sustainable development in order to encourage a shift to more sustainable consumption and production patterns. Industrialized countries should take the lead in this process.

11. Sustainable development should be encouraged with continuous innovation and the adoption of environmentally sound technologies to change current production and consumption patterns. The challenge is to implement measures that will have a significant long-term impact on preventing and mitigating pollution and resource consumption alongside continued growth in gross domestic product (GDP). Eco-efficiency, cost internalization and policies for products and services are important tools for making consumption and production patterns more sustainable.

12. Foreign investment can play a significant and positive role in achieving sustainable development – for example, through the diffusion of environmentally sound technologies, including environmental management techniques and tools, and in capacity-building and poverty alleviation through employment generation. It can, however, contribute to environmental problems when undertaken with inadequate regard to environmental, economic and social consequences. Consideration should be given to an assessment of the implications for sustainable development of foreign investment.

13. Business and industry should be encouraged to develop and implement voluntary guidelines and codes of conduct which can help to promote and disseminate best practices in environmentally and socially responsible entrepreneurship, and to develop further those that already exist. To be effective, business and industry need to develop and implement such codes by themselves, for that will ensure their commitment to the process. Equally important, their credibility with stakeholders requires that the codes stimulate positive action that goes well beyond "business as usual". Therefore, an essential element is transparency in monitoring and public reporting of progress.

14. Governments at all levels, industry, trade unions and other organizations of civil society, in particular women's organizations, should work together towards the elimination of discrimination against women in employment, education, property ownership and access to credit and to ensure that women have effective equal access to economic opportunities and social participation. Governments should ensure that their social and industrial policies are gender-sensitive.

15. Particular efforts are needed to promote small and medium-sized enterprises and entrepreneurial potential, in, *inter alia*, the informal sector in developing countries. Sustainable development requirements need to be translated into concrete action for small and medium-sized enterprises. Governments, with the support of the international community, as appropriate, can develop policy frameworks to support investment, including the provision of micro-credit, and access to technology know-how and training. Large companies and transnational corporations can provide support by working through the supply chain, including local suppliers.

16. Training should be utilized by all sectors and societies to promote cleaner production. The training should stress the

integration of economic, social and environmental matters as government, industry and civil society implement the policies and programmes.

C. Recommendations for Governments

17. Within a supportive international environment, Governments should create an enabling policy environment in order to encourage domestic private enterprise and economy-wide competitiveness through improvements in infrastructure and educational, financial and legal institutions; encourage research and development; and facilitate exports and the liberalization of domestic markets. These reforms can encourage investment, innovation, diffusion of technology and more efficient use of resources.

18. Governments should continue to promote the integration of environmental and industrial policies, with emphasis on the preventive approach. Governments need to adopt policies and regulations that set clear environmental goals and objectives for industry through strategic environmental policies at the national and subnational levels. They also need to develop and promote appropriate policy frameworks to help mobilize the full range of domestic and foreign resources from all sectors, including industry, in support of sustainable development.

19. Since not all developing countries can attract adequate levels of foreign direct investment (FDI) for their industrial development, official development assistance (ODA) remains a main source of external funding for them, particularly in Africa and in the least developed countries. ODA plays a significant role, *inter alia*, in capacity-building, infrastructure, poverty alleviation and environmental protection in developing countries, and a crucial role in the least developed countries.

20. Development strategies should encompass ODA and should include the effective use of all possible means of promoting sustainable development and the facilitation of private investment, trade, technology transfer, and utilization of science and technology, tailored to the specific conditions and needs in each country. It is urgent that measures be taken to foster and improve capacity-building over the long term.

21. While not replacing ODA, FDI offers developing countries and economies in transition access to additional capital, new technologies, organization and management methods, and markets as well as opportunities to exploit complementarities between domestic and foreign investment. A stable policy environment is necessary to attract FDI and to ensure confidence among domestic entrepreneurs and foreign investors. Ways and means of encouraging FDI flows between developing countries should be explored.

22. Governments in developed countries should encourage FDI to assist developing countries and economies in transition in their development in a way friendly to the environment and supportive of sustainable development. The commitment of foreign investors to sustainable development is required while they pursue their commercial interests.

23. To ensure that such investments are supportive of sustainable development objectives, it is essential that the national Governments of recipient countries provide appropriate regulatory frameworks and incentives for private investment, including those that promote the availability of micro-credit. Therefore, further work should be undertaken on the design of appropriate policies and measures aimed at promoting long-term investment flows to developing countries for activities that increase their productive capability and at reducing the volatility of those flows.

24. When devising and implementing environmental regulatory frameworks, Governments should seek to ensure that such frameworks encourage, as appropriate, private sector activities that promote sustainable development. The traditional method of command and control, based on effluent and emission standards should be developed or modified, as appropriate, with ample participation of industry and civil society, to become an enabling factor and the basis for a judicious mix of economic instruments, voluntary industry initiatives and public and private partnerships.

25. There is need for making existing subsidies more transparent in order to increase public awareness of their actual economic, social and environmental impacts, and for reforming or, where appropriate, removing them. Further national and international research in this area should be promoted in order to assist Governments in identifying and considering phasing-out subsidies that are market-distorting and have socially and environmentally damaging impacts. Subsidy reductions should take full account of the specific conditions and the different levels of development of individual countries and should consider potentially regressive impacts, particularly on developing countries. In addition, it would be desirable to use international cooperation and coordination to promote the reduction of subsidies where they have important implications for competitiveness.

26. Governments should encourage the implementation of environmental management systems. In order to widely disseminate environmental management concepts in small and medium-sized enterprises, especially in developing

countries, the instruments and methods of environmental management have to be adapted to their specific capacities and needs, making them easier to apply and less costly. Networks of intermediaries who can assist small and medium-sized enterprises in improving their environmental performance should be encouraged.

27. Governments, at the national level, are encouraged to address the issue of occupational health and safety standards in small and medium-sized enterprises and in industry.

28. Increased efforts are needed by Governments, in cooperation with industry, trade unions and civil society, to ensure universal compliance by industry, including informal enterprises, of core labour standards as contained in the Conventions of the International Labour Organization (ILO). Such standards include freedom of association, the right of collective bargaining, prohibition of forced and child labour, and non-discrimination in employment.

29. Governments can set a good example and create a market for more environmentally friendly products and services by providing, as appropriate, adequate infrastructure, establishing goals on procurement that take account of environmental factors, and encouraging all relevant governmental bodies to introduce environmental management systems. Governments can improve the quality of information on the environmental impact of products and services and, to that end, encourage the voluntary and transparent use of eco-labelling.

30. Social objectives should be an integral part of sustainable development, and the over-riding social policy challenge for government and industry is to promote the positive impacts of industrial activities on social development, while limiting or eliminating the negative impacts. This can be achieved by various means, in particular through improved access to education and health care. Governments should give priority to ensuring universal access to basic education and to expanding access to secondary education. Tax incentives, for example, may be useful to encourage companies to invest in training and education for their workers. Governments and civil society should also address the problem of rapidly expanding labour forces, especially youth labour.

31. Since the creation of employment plays a pivotal role in the alleviation of poverty, industrial policies should promote linkages between enterprises in the formal and informal sectors, including transnational corporations.

32. Governments, where appropriate, should cooperate with industry, trade unions and other concerned organizations of civil society in expanding, strengthening and ensuring the sustainability of social security schemes. Governments should also ensure that the benefits of pension systems are secure and transferable between employers. Moreover, Governments, in cooperation with industry, should ensure that such coverage is as broad as possible and, where feasible, based on mandatory worker and employer participation.

33. The fulfilment of greenhouse gas emission reduction targets agreed upon in the Kyoto Protocol to the United Nations Framework Convention on Climate Change[3] needs to be achieved within set time-frames in developed countries. The fulfilment of commitments assumed by different countries, in accordance with the principle of common but differentiated responsibilities, is important.

34. Attention should be given to studies that propose to improve the efficiency of resource use, including consideration of a 10-fold improvement in resource productivity in industrialized countries in the long term and a possible four-fold increase in resource productivity in industrialized countries in the next two or three decades. Further research is required to study the feasibility of these goals and the practical measures needed for their implementation. Industrialized countries will have a special responsibility and must take the lead.

35. The concept of eco-efficiency should not be a substitute for changes in unsustainable lifestyles of consumers, and the pursuit of eco-efficiency also requires enhanced efforts to assist developing countries in their efforts to promote sustainable consumption and production patterns, by improving access to financial resources and environmentally sound technologies.

36. Voluntary initiatives by all subsectors of industry have been a valuable tool in protecting the environment. Governments should continue to encourage voluntary initiatives by industry, in both the formal and informal sectors, including voluntary and transparent codes of conduct, charters and codes of good practice, and the conclusion of voluntary agreements. Effective monitoring and follow-up programmes with stakeholder participation are needed, and industry should provide better and more complete dissemination of information of their voluntary initiatives. In addition, the assessment of progress made throughout a sector or country needs to be facilitated by developing a set of relevant indicators and metrics.

37. In order to strengthen domestic technological capabilities, it is useful for Governments to develop a national science and technology strategy and to support capacity building to promote partnerships with industry. Greater cooperation between industry and public research

and development bodies is needed to develop the skill and knowledge base necessary for a successful domestic technology strategy and the absorption of imported technologies.

38. Technology transfer and cooperation and the development of the human and institutional capacities to adapt, absorb and disseminate technologies and to generate technical knowledge and innovations are part of the same process and must be given equal importance. Governments have an important role to play in providing, *inter alia*, research and development institutions with incentives to promote and contribute to the development of institutional and human capacities.

39. Control and influence over the technological knowledge produced in publicly funded research opens up the potential for the generation of publicly owned technologies that could be made accessible to the developing countries and could be an important means for Governments to catalyse private-sector technology transfers. Proposals for the further study of the options with respect to those technologies and publicly funded research and development activities are welcomed.

40. The Governments of developed countries are invited to encourage private-sector companies in their countries to transfer environmentally sound technologies to developing countries. Such transfers should be underpinned by matching technical assistance and the transfer of education and skills, taking into account the unique circumstances and characteristics of small and medium-sized enterprises.

41. The ongoing process of globalization may bring with it a higher rate of technological progress and diffusion. Innovations in industry and their diffusion will no doubt be among the most important mechanisms for progressively delinking economic growth from environmental degradation. The dynamics of innovation in industry thus deserve careful study so as to determine what triggers innovation and how innovations are taken up by society. Studies are also needed on the possible environmental and social effects of innovation. Policies, including incentives, are needed which can steer innovation and investment in directions conducive to sustainable development.

D. Recommendations for industry

42. Companies can enable consumers to make more informed choices by providing reliable and accurate information on the impacts, and where possible, conditions of production and qualities of products and services, through their marketing and advertising activities, environmental reporting, and improved stakeholder dialogue.

43. Industry and civil society should work with Governments to strengthen secondary, vocational and advanced education and to ensure that it meets the developmental needs of society and the economy. This includes fair treatment of employees and constructive training programmes.

44. Environmentally oriented management should aim at both preventing environmental damage and encouraging sustainable use of natural resources through, for example, more efficient use of energy, water and raw materials; the reduction of emissions into the air, water and soil; the reduction of noise impacts; the reduction of waste; and the development of environmentally sound products and services. Environmental management systems and practices suitable to particular circumstances can enable business to control its environmental impacts and stimulate awareness of sustainability as a key business issue. To maintain and enhance competitiveness over the longer term, companies need to integrate environmental and social sustainability into their strategic planning. This includes developing cleaner products and processes which use resources more efficiently and minimize environmental impacts.

45. Industry should act to improve its environmental performance through appropriate implementation of environmental management systems. For example, transnational corporations should consider setting a time-frame within which to fully implement such systems. At the same time, Governments and industry must also work together to develop policies to ensure that compliance with standards is not too costly or difficult to achieve for companies in developing countries. National certification schemes should be based upon the principles of transparency and non-discrimination and should not be used as non-tariff trade barriers.

46. Large corporations should apply best practice in their own branches, both domestically and abroad. Companies are encouraged to provide environmentally sound technologies, supported by appropriate management techniques and training, *inter alia*, so as to help companies in other countries, particularly developing countries, to develop and implement environmentally sound policies. Those companies and corporations should also be proactive in promoting the implementation of core ILO labour standards.

47. Chambers of commerce and business organizations in developed and developing countries should be encouraged to cooperate in the transfer of technology and in the

development of management tools and institutional frameworks for sustainable development.

48. There is a growing trend among a variety of stakeholders to hold industry accountable and responsible for the environmental impact of its operations and products throughout their entire life-cycle. The industry and business sectors should respond positively to these demands by continuing to develop voluntary codes of conduct, charters and codes of practices. Industry and business should observe these codes when operating in developing countries and in economies in transition, in particular, where environmental enforcement is still being developed.

49. The financial sector has an important role to play in promoting sustainable development. Voluntary commitments and initiatives taken by the financial sector (banks, savings and micro-credit institutions, and insurance companies) which promote sustainable development should be further developed and implemented, and strategies for monitoring progress should be developed. Since financial institutions play an important role in sustainable development in developing countries, their policies may include requirements and incentives to stimulate sustainable development and to report on their progress.

E. Recommendations for the international community

50. The principles of transparency, mutual recognition and non-discrimination, which serve as building blocks for the multilateral trading system, should also serve as basic principles in other areas, such as sustainable development. The development of environmental standards, voluntary codes of conduct and eco-labelling should be viewed as facilitating tools to ensure the fulfilment of environmental objectives, rather than as necessary elements to be checked for the achievement and measurement of sustainability.

51. The international community needs to assist developing countries and economies in transition in their efforts to facilitate their adoption of production technologies that reduce environmental pressures while, at the same time, allowing them to be more competitive in international markets. Therefore, there is a real need to disseminate information about environmentally sound technologies to developing countries on a broader scale. The United Nations Industrial Development Organization (UNIDO), United Nations Environment Programme (UNEP), United Nations Conference on Trade and Development (UNCTAD) and other relevant agencies should be invited to focus their programmes in order to promote the transfer of environmentally sound technologies, particularly to small and medium-sized enterprises in developing countries.

52. The international community, working notably through the United Nations Educational, Scientific and Cultural Organization (UNESCO), UNIDO, UNEP, other United Nations agencies active in the implementation of chapters 30 and 36 of Agenda 21, and non-governmental organization partners, should strengthen the links between education and industry leading to sustainable development by assisting developing countries in their national efforts to strengthen secondary, vocational and advanced education.

53. When promoting measures favouring eco-efficiency, developed countries should pay special attention to the needs of developing countries, in particular by encouraging positive impacts, and to the importance of avoiding negative impacts on export opportunities and on market access for developing countries and, as appropriate, for countries with economies in transition. Implementation of environmental measures should not result in disguised barriers to trade.

54. Industrialization is a key element in promoting sustainable development in developing countries, particularly in Africa and the least developed countries. It plays an important role in the efforts of those countries to eradicate poverty, create productive employment and integrate women into the development process. The business community, especially the small and medium-sized enterprises, have a particularly important role in enhancing industrialization. There is need for UNIDO, UNEP and other relevant United Nations agencies to enhance their activities in developing and implementing sustainable industrial development strategies, including taking into account the implementation of the Second Industrial Decade for Africa.

55. The international community, UNIDO and other relevant United Nations agencies are encouraged to provide appropriate financial and technical support to enable industries in developing countries to comply with national environmental goals and objectives through strategic environmental policies at the national and subnational levels.

56. FDI can contribute to the achievement of sustainable development. To promote FDI flows to developing countries, in particular to the least developed among them, greater emphasis should be placed by the United Nations system on promotional and information-dissemination activities relating to investment opportunities in the developing countries.

57. There is need for further assessment of the implications of foreign investment for sustainable development, building

on past work and taking into account relevant current activities. Such assessment should take into account all existing relevant activities and processes and build on work undertaken in preparation for the fifth session of the Commission on Sustainable Development. UNCTAD should be invited to investigate the issue and report the results to the Commission at its seventh session. Furthermore, UNCTAD and the World Trade Organization (WTO) should report on their relevant activities.

58. Multilateral financial institutions, through their investment agreements, programmes and projects, should contribute to sustainable development and the use of environmentally sound technologies.

59. Any negotiations on multilateral investment agreements should be participatory, transparent and non-discriminatory. The negotiations of these agreements should include the specific social, economic and environmental needs of developing countries. A multilateral agreement on investments is currently being negotiated in OECD. Without prejudice to the clear understanding in the WTO that future negotiations, if any, regarding a multilateral agreement on investments will take place only after an explicit consensus decision, future agreements on investments should take into account the objectives of sustainable development, and when developing countries are parties to those agreements, special attention should be given to their needs for investment.

60. Full implementation of the recommendations of the World Summit for Social Development[4] would effectively address growing international income disparities among and within countries and the risk that some countries and groups might fall deeper into poverty and exclusion. Policies are needed to implement the commitments expressed in the Copenhagen Declaration[5] to, *inter alia*, expand productive employment, reduce unemployment, enhance social protection and reduce the vulnerability of the poorest groups. The ILO has a central role in monitoring the implementation of relevant labour standards, and in stimulating patterns of economic growth that provide job opportunities. Concerted action by interested countries for the implementation of the 20:20 Initiative is making a significant contribution to some developing countries, particularly the least developed.

61. Development of policies to implement the outcome of the Fourth World Conference on Women, which reaffirmed the advances made at the Conference on Environment and Development and emphasized the need to mainstream a gender perspective into the development agenda, is of great importance.

62. Further work should be undertaken at the international level to develop criteria to improve corporate environmental reporting. UNEP and UNCTAD could take the lead in that respect, in cooperation with other organizations, as appropriate.

63. Reflecting the sectoral focus on freshwater, UNEP, working jointly with other relevant United Nations agencies, should be invited to cooperate with the relevant industry sectors to develop a voluntary statement of business-led commitment on the protection and sustainable management of water resources.

64. The secretariats of international conventions on the environment should consider the need to include technology and other technical information in a "clearinghouse" to facilitate fulfilling the commitments of the conventions.

65. Concern was expressed regarding the impact of the current intellectual property regime and the need for protection of intellectual property rights in the transfer of environmentally sound technologies. The international community should promote, facilitate and finance, as appropriate, access to and transfer of environmentally sound technologies and the corresponding know-how, in particular to developing countries, on favourable terms, including concessional and preferential terms, as mutually agreed, taking into account the need to protect intellectual property rights as well as the special needs of developing countries for the implementation of Agenda 21. Current forms of cooperation involving the public and private sectors of developing and developed countries should be built upon and expanded. It is important to identify barriers and restrictions to the transfer of publicly and privately owned environmentally sound technologies with a view to reducing such constraints, while creating specific incentives, fiscal and otherwise, for the transfer of such technologies.

66. South/South cooperation is an important instrument for facilitating the diffusion of technology and industry, and as a complement to North/South relations. South/South cooperation could be further strengthened through such innovative mechanisms as trilateral arrangements. Such mechanisms should be supported as an important means of achieving sustainable development and the alleviation of poverty. UNEP, UNIDO and other relevant United Nations agencies should be invited to sustain and strengthen their programmes that promote the transfer of environmentally sound technologies, particularly to small and medium-sized industries in developing countries. Regional cooperation should also be encouraged and strengthened.

F. Future work

67. Relevant international organizations should study the different voluntary schemes that have been formulated with regard to industry, the effects of the technologies used to cope with problems, and the prospects for introducing them elsewhere. It is important that, where necessary, they should create a framework to support the strengthening of efforts by the industry side.

68. The Commission should consider, with industry, how follow-up to the dialogue established with industry might be maintained and developed to ensure effective and continuing contributions from industry to the Commission's work programme. In so doing, the Commission should also consider how industry, through its international and sectoral organizations, should be consulted and associated with the follow-up to that dialogue. The Commission should, in cooperation with other relevant intergovernmental bodies, industry, trade unions, non-governmental organizations and other major groups, establish a process to review the effectiveness of voluntary initiatives intended to promote sustainable and equitable business practices. It is also important that the Commission continue to address the role of industry in sustainable development in the context of different sectoral and cross-sectoral themes allocated for its future sessions. The result of work undertaken in the follow-up to the Joint Statement on Common Interests by the Secretary-General of the United Nations and the International Chambers of Commerce could be taken into account in further dialogue with industry in the Commission.

69. Governments and industry should be encouraged to improve, in general, their reporting of progress in voluntary initiatives and environmental protection and, in particular, as a follow-up to the industry segment at the sixth session of the Commission. Such reporting and follow-up activities should have the active involvement of the Commission, UNEP, UNCTAD, UNIDO and others – for example, the International Chambers of Commerce and the World Business Council on Sustainable Development, at the international level, and trade associations at the subsectoral level. The involvement of trade associations at the subsectoral level may be useful for ensuring better reporting in key subsectors such as energy and transport, mining, cement, paper and pulp, iron and steel, and chemicals. Discussion of changing consumption and production patterns at the seventh session could provide the first opportunity for such enhanced voluntary reporting.

III. Guidelines for sustainable consumption

70. Since their adoption in 1985, the United Nations guidelines for consumer protection[6] have assisted countries in developing and strengthening national consumer protection policies. There is now a need to extend the guidelines to reflect new understandings of the importance of sustainable development and of the links between consumption and production patterns and the environment.

71. Governments, business and industry, and consumers share responsibility for promoting sustainable consumption patterns. Governments should establish frameworks of national consumer policies and should set an example of sustainable consumption through their own procurement and other activities. Business and industry should be encouraged to provide consumers with information on their activities, including environmental and social assessments, to enable consumers to make informed choices of goods and services. The elaboration of guidelines on sustainable consumption can assist Governments in developing national consumer policies in these and other areas.

72. Consumption and production patterns will be the cross-sectoral theme of the Commission at its seventh session, in 1999.

73. The holding of the Interregional Expert Group Meeting on Consumer Protection and Sustainable Consumption (São Paolo, Brazil, 28-30 January 1998), as called for by the Economic and Social Council in resolution 1997/53, and its report (E/CN.17/1998/5) are noted with appreciation. The proposed new elements for guidelines on sustainable consumption prepared by the São Paolo Expert Group Meeting provide a good basis for further work and need to be considered in detail.

74. Further consideration of the process for elaborating guidelines for sustainable consumption, as part of the United Nations guidelines for consumer protection, should be undertaken by the Commission at its sixth session. The Commission should consider how to proceed with a detailed consideration of new guidelines and report to the Economic and Social Council at its 1998 substantive session, as requested in resolution 1997/53.

IV. Organizational matters

A. Opening and duration of the session

75. The Inter-sessional Ad Hoc Working Group on Industry and Sustainable Development of the Commission on Sustainable Development met in New York from 2 to 6 March 1998, in accordance with Economic and Social Council resolution 1997/63 of 25 July 1997. The Working Group held 9 meetings (1st to 9th meetings).

76. The meeting was opened by the temporary Chairman, Ms. Marta Inés Galindo (Colombia), Vice-Chairman of the Commission on Sustainable Development.

B. Attendance

77. The session was attended by representatives of 40 States members of the Commission on Sustainable Development. Observers for other States Members of the United Nations and the European Community, representatives of organizations of the United Nations system and observers for intergovernmental and non-governmental organizations also attended. A list of participants is given in the annex below.

C. Election

78. At the 1st meeting, on 2 March 1998, the Working Group elected, by acclamation, Mr. Michael Odevall (Sweden) and Mr. Antonio Fernando Cruz de Mello (Brazil) as Co-Chairmen.

79. At the same meeting, the Co-Chairman made an introductory statement.

D. Agenda and organization of work

80. At the 1st meeting, on 2 March 1998, the Working Group adopted its provisional agenda, contained in document E/CN.17/ISWG.II/1998/1, and approved its organization of work. The agenda read as follows:

1. Election of officers.
2. Adoption of the agenda and other organizational matters.
3. Industry and sustainable development.
4. Guidelines for consumer protection.
5. Other matters.
6. Adoption of the report of the Working Group.

E. Documentation

81. The Working Group had before it the following documents:

(a) Report of the Secretary-General on industry and sustainable development (E/CN.17/1998/4);

(b) Report of the Secretary-General on industry and sustainable development: industry and economic development (E/CN.17/1998/4/Add.1);

(c) Report of the Secretary-General on industry and sustainable development: industry and social development (E/CN.17/1998/4/Add.2);

(d) Report of the Secretary-General on industry and sustainable development: industry and environmental protection (E/CN.17/1998/4/Add.3);

(e) Report of the Secretary-General on consumer protection: guidelines for sustainable consumption (E/CN.17/1998/5).

F. Adoption of the report of the working group

82. At the 9th meeting, on 6 march 1998, the Working Group had before it the draft report (E/CN.17/ISWG.II/1998/L.1 and E/CN.17/ISWG.II/1998/CRP.2) and an informal paper.

83. At the same meeting, the Working Group took note of the informal paper and adopted its report.

Notes

[1] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigenda), resolution 1, annex II.

[2] Ibid., annex I.

[3] Adopted at the third session of the Conference of the Parties, on 11 December 1997.

[4] See *Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995* (United Nations publication, Sales No. E.96.IV.8).

[5] Ibid., chap. I, resolution 1, annex I.

[6] General Assembly resolution 39/248, annex.

Annex

List of participants

Members

Antigua and Barbuda:

Australia: JoAnne DiSano, Kerry Smith, Emma Ferguson, Kylie Oakes-Ati, Amanda Hawkins

Bahamas: Maurice E. Moore, Sharon Brennen-Haylock, Sandra P. Carey, Allison P. Christie

Bangladesh: Anwarul Karim Chowdhury, F. A. Shamim Ahmed, Muhammad Ali Sorcar

Belgium: Alex Reyn, Jan Verschooten, Marc Gedopt, Remy Merckx, Joseph-Simon Smitz, Hugo Brauwers, Johan Debar, Jan de Mulder

Benin: Fassaddi Adam Yacoubou, Rogatien Biaou, Samuel Amehou, Charles Borromee Todjinou, Thomas D'Aquin Okoudjou, Thomas Guedegbe, Paul H. Houansou

Bolivia: Alberto Salamanca, Estela Mendoza, Gustavo Claros

Brazil: Enio Cordeiro, Antonio Fernando Cruz de Mello, Eduardo Carvalho, Carlos Alberto Michaelsen den Hartog

Bulgaria: Vladimir Sotirov, Zvetolyub Basmajiev,

Burundi: Gamaliel Ndaruzaniye, Jean-Baptiste Hajayandi

Canada: Richard Ballhorn, Ken MaCartney, Brigita Gravitis-Beck, Denis Chouinard, Yvan Jobin, Renée Sauvé, Guy Rochon, Carol Smith-Wright, Veena Halliwell, Andrew Kenyon, Kevin Wisener, David Malone, Barry Burciul, James Riordan, Linda Dunn, Janet Stephenson, Tim Hodges

Central African Republic:

China: Zhang Yue, Cai Lijie

Colombia: Julio Londono Paredes, Jairo Montoya Pedroza, Martha Galindo, Maria Andrea Alban

Djibouti:

Egypt: Nabil Elaraby, Hussein Ehsan El-Atfy, Adel Abdellatif, Mohamed Fattah

Ethiopia: Mohammed Duri, Berhanemeskel Nega, Meheret Getahoun, Bisrat Gidey K. Mariam

Finland: Taisto Huimasalo, Risto Ranki, Asko Luukkainen, Antero Honkasalo, Marit Huhta, Jorma Suvanto, Salla Korpela, Jukka Uosukainen, Hanelle Nyroos, Marjo Nummelin

France:

Gabon:

Germany: Gerhard Henze, Cornelia Quennet-Thielen, Wolfgang Runge, Rainald Roesch, Knut Beyer, Karsten Sach, Hans-Joachim Kampe, Elfriede Bierbrauer, Carola Schmidt, Peter Christmann, Jurgen Wenderoth, Claudia Warning, Wolfgang Grabs, Bernd Schleich, Luiz Ramalho, Frank Schulte

Ghana:

Guyana: S. R. Insanally, G. Talbot, K. Simon

Hungary: Mr. Csaba Nemes, Sándor Mózes

India:

Indonesia: Arizal Effendi, Mochammad Slamet Hidayat, Bagas Hapsoro, Sidharto Reza Suryo-di-Puro

Iran (Islamic Republic of): Bagher Asadi, Mohammad Reza Hadji Karim Djabbari, Esmail Tekyeh Sadat

Ireland: Dympna Hayes, Damien Boyle

Japan: Wataru Nishigahiro, Hideki Ito, Yasufumi Enomura, Masahiko Tanoi, Hidefumi Kurasaka, Hirotsugu Ikeda, Akikazu Adachi, Takemasa Minemoto, Nobumasa Nakashima, Kiyofumi Kobayashi, Yutaka Yoshino

Mexico: Manuel Tello, Cesar Herrera Toleda, Gerardo Lozano, Roberto Cabral, Francisco Giner, Ramon Benitez, Veronique Deli, Sandra Pina, Ulises Canchola, Mirella Areyzaga, Bertha Elena De Buen, Ruben Barocio Ramirez

Mozambique:

Netherlands: Pieter Verbeek, Maarten de Hoog, Ron Lander, Vincent van den Bergen, Albert van der Beesen, Gerard Broseliske, Daniel Pietermaat, Jeroen Steeghs, Herman Verheij, Karin Wester, Linda Docter

Niger:

Pakistan:

Panama: Judith M. Cardoze

Papua New Guinea: Utula U. Samana, Jimmy U. Ovia, Adam V. Delaney

Peru: Marcela Lopez Bravo de Ruiz, Italo Acha

Philippines:

Poland: Wojciech Ponikiewski, Jacek Jaskiewicz

Russian Federation: Nikolai V. Tchoulkov, Aleksandr Grachev, Vassili Nebenzie, Dmitry Maksimitchev, Sergei Fedotov

Saudi Arabia: Ali Bahaitham, Ahmed ElDahry

Senegal:

Slovakia: Jozef Klinda, Kamil Vilinovic

Spain: Inocencio F. Arias, Arturo Laclaustra, Amparo Rambla, Francisco Rabena, Marta Betanzos, Manuel Varela

Sudan: Elfatih Erwa, Mubarak Ramtalla, Daffa-Alla Alhag Ali Osman, Omer Dahab Fadol Mohamed, Tarig Ali Bakhit, Mohamed Mustafa M. Ahmed

Sweden: Michael Odevall, Hans Lundborg, Per Tegner, Anders Berntell, Mats Ekenger, Sofie Nordstrom, Per Augustsson, Pia Lovkvist, Ingvar Andersson

Switzerland: Livia Leu Agosti

Thailand: Charivat Santaputra, Prasert Tapaneeyangkul, Manop Mekprayoonthong, Arunrung Phothong

Ukraine: Volodymyr M. Reshetnyak

United Kingdom of Great Britain and Northern Ireland: Sheila McCabe, Peter Gooderham, Ian Symons, Alan Simcock, Scott Ghagan, Alistair Wray, Richard Dewdney, Michael Massey, David Dunn, Robert Baldi, Alasdai Wardhaugh, Peter Dearden, David Townsend, Chris Tompkins

United States of America: Mark G. Hambley, Betty King, Adela Backiel, Donald Brown, Ann Carey, James Freud, Donald Burgess Laird, Deborah Linde, John Matuszak, Wendy McConnel, Lynette J. Poulton, Seth Winnick, Kirk Barrett, William Breed, Ronald Hoffer, Timothy Kasten, Gerry Dell Priscoli, Jane Siegel, Sandra Smithey, Zell Steever, Gail Karlsson, Norine Kennedy, Thomas Rogers

Venezuela:

Zimbabwe: Machivenyika T. Mapuranga, Alfred Mutiwazuka, Sibokile Mtetwa

States Members of the United Nations represented by observers

Algeria, Argentina, Austria, Chile, Côte d'Ivoire, Cuba, Denmark, Ecuador, El Salvador, Greece, Guatemala, Italy, Jamaica, Jordan, Kenya, Malta, Malaysia, Monaco, Morocco, Namibia, New Zealand, Nigeria, Norway, Republic of Korea, Slovenia, Syrian Arab Republic, Tunisia, Turkey, Uruguay.

Entities represented by observers

European Community

Intergovernmental organizations

Agency for Cultural and Technical Cooperation, Organisation for Economic Cooperation and Development

Specialized agencies and related organizations

United Nations Educational, Scientific and Cultural Organization; World Health Organization; United Nations Industrial Development Organization

Non-governmental organizations

General consultative status with the Economic and Social Council: Franciscans International, International Chamber of Commerce, International Confederation of Free Trade Unions, World Wide Fund for Nature International

Roster or accredited to the Commission on Sustainable Development: Alliance to End Childhood Lead Poisoning, Alliance of Northern Peoples for Environment and Development, Association of the Bar of the City of New York, Earth Council, Friends of the Earth, Institute for Agriculture and Trade Policy, International Institute for Sustainable Development, Netherlands Committee for IUCN, The Other Economic Summit, United Nations Environment and Development – UK Committee, Women's Environment and Development Organization, World Sustainable Agriculture Association, Zero.

UNITED NATIONS **E**

Economic and Social Council

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COMMISSION ON SUSTAINABLE DEVELOPMENT
Sixth session
20 April-1 May 1998
Item 8 of the provisional agenda*

OTHER MATTERS

Note verbale dated 30 March 1998 from the Permanent Mission of the Czech Republic to the United Nations addressed to the Secretary-General**

The Permanent Mission of the Czech Republic to the United Nations presents its compliments to the Secretary-General and has the honour to inform him that the Government of the Czech Republic hosted the Fourth International Workshop on Indicators of Sustainable Development in January 1998 as a follow-up to similar international seminars held previously.

In order to facilitate the work of the Commission on Sustainable Development at its sixth session, the Government of the Czech Republic requests that the attached report of the Workshop be made available as an official document of the Commission.

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* E/CN.17/1998/1.

** The attachment is being issued in the language of submission only.

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Fourth International Workshop
on Indicators of Sustainable Development

Hosted by the Government of the Czech Republic
supported by the European Commission

Prague, the Czech Republic
19-21 January 1998

Report

I. Introduction

1. In support of the CSD Work Programme on Indicators of Sustainable Development, the Government of the Czech Republic, with assistance provided by the European Commission, convened the Fourth International Workshop on Indicators of Sustainable Development. The workshop was held in Prague from 19 to 21 January 1998 and follows previous workshops held in Ghent, Belgium and Glen Cove, USA. The main purpose of the workshop was to bring together those countries involved in the national testing of indicators of sustainable development and to promote the exchange of experience among testing countries and to develop conclusions and recommendations for improving the testing process and the further development of indicators. The meeting covered the main areas presented below. The final report of the workshop will be submitted by the Government of the Czech Republic to the sixth session of the CSD in April 1998

2. The programme of the meeting is contained in Annex I, the List of Participants in Annex II and the summaries of individual country presentations in Annex III of this document.

3. The workshop was attended by 19 of 21 testing countries including: Barbados, Belgium, Bolivia, Brazil, China, Costa Rica, The Czech Republic, Finland, France, Germany, Ghana, Kenya, Maldives, Mexico, Morocco, The Philippines, South Africa, The United Kingdom and Venezuela

II. Opening of the Workshop

4. Mr. Vladislav Bizek, the Deputy Minister of the Environment of the Czech Republic and Mr. Bedrich Moldan of Charles University opened the workshop. Ms. Minna Wilkki, representing the European Commission and Mr. Lowell Flanders, representing the Secretariat of the Commission

on Sustainable Development also made introductory and welcoming remarks on behalf of their respective organizations.

III. Adoption of the Agenda and Election of Officers

5. The workshop elected Mr. Vladislav Bizek, Deputy Minister of Environment, the Czech Republic as Chair of the meeting. Mr. Edwin Barnes (Ghana), Mr. Bedrich Moldan (Czech Republic) and Mr. Lowell Flanders (CSD Secretariat) were elected co-chairs. The meeting elected Ms. Nadine Gouzée (Belgium) as rapporteur of the meeting. The meeting adopted the Draft Agenda which was submitted.

IV. Results of the UN Special Session and Status of the CSD Work Programme on Indicators of Sustainable Development

6. Mr. Lowell Flanders and Ms. Birgitte Bryld representing the Secretariat of the Commission on Sustainable Development, reviewed the results of the UN General Assembly Special Session (UNGASS) in June 1997 and brought participants up to date on the status of implementation of the CSD Work Programme on Indicators of Sustainable Development. The main areas of success in the UNGASS process were highlighted. The completion of three regional briefing and training workshops for Asia and the Pacific, Latin America and the Caribbean and Africa regions were noted. In response to the need for availability of main documents in French and Spanish as identified at these workshops, the document *Indicators of Sustainable Development: Framework and Methodologies*, has been sent to translation and should be near completion. It was emphasized that implementation and testing of indicators are underway in all regions of the world, although some countries are more advanced than others are. Of the 21 countries that confirmed their participation in the process, all have submitted information on their respective focal points and coordinating mechanism, and about half have submitted reports containing their initial proposals of how to organize the testing procedure within their countries.

V. Results of Regional Workshops and Regional Indicator Initiatives

7. Mr. Adrian G. Rodriguez, representative of the Government of Costa Rica, presented the results of the Latin America and Caribbean Regional Workshop hosted by the Government of Costa Rica, from 10-12 March 1997, in connection with a national conference under the National System for Sustainable Development (SINADES) framework. The workshop had the overall objective to brief participants from National Councils for Sustainable Development, ministries of planning or the ministry responsible for environment and sustainable development, on the CSD Work Programme, and provide in-depth training in the use of indicators as tools to support national planning and

decision-making. Participants included representatives from 15 countries, UN organizations, and government experts in indicator use. A series of conclusions and recommendations were highlighted, including that such workshops were needed to provide a better appreciation of the relationship between priority setting and measurement and the methodological issues related to SD indicators. Developing and applying indicators takes time, effort, and commitment over the long term, and must be pragmatic, flexible, and build on national strengths. Information sharing and capacity-building among nations and organizations were mentioned as important.

8. Mr. Aslam M. Khan, representing ESCAP, presented the work ongoing in the Asian and Pacific region. ESCAP has initiated a regional approach to the CSD Indicators of Sustainable Development for the Asian and Pacific region. This includes preparation of Terms of Reference for National Testing and other training materials and workshops at the regional and national levels. ESCAP hosted, in cooperation with the Government of the Netherlands and DPCSD, a regional workshop, from 26-29 November 1996. The results of the workshop and follow-up activities are now available in an ESCAP publication. The workshop helped to highlight the relationship between priority setting and measurement in charting a course to sustainable development. It was recognized that the Coordinating Mechanism at the national level would need to be country specific, due to the variety of governmental structures. However, the idea of a national inter-agency coordination mechanism was strongly endorsed, emphasizing the essential need to include the Planning Ministry, to ensure implementation. Regional follow-up includes provision of small seed funds to testing countries, to enable them to organize national workshops and promote case studies.

9. Mr. Edwin Barnes, representing the Government of Ghana, presented the African Regional Capacity 21/DPCSD Workshop on Indicators of Sustainable Development, hosted by the Government of Ghana, in Accra, from 3-6 June 1996. Part I of the workshop dealt with the indicators programme, Part II dealt with the Capacity 21 Programme. The workshop concentrated on discussing priorities and the related indicators of sustainable development, specific for the region. Key priorities were reported to include among others poverty, access to services, natural resource degradation, desertification, high population growth rates and capacity building. The "Blue Book" was seen as a comprehensive information tool and starting point, but did not include all issues relevant to the region such as indicators for governance, competition for natural resources and policy and strategy formulation. The workshop stressed the need for financial and human resource support at the national level, based on the fact that one major problem facing most countries was the availability and reliability of data, including the institutional framework for data collection, compilation, analysis and dissemination. The workshop created awareness among participants of the CSD indicator approach and usefulness to monitor national decision-making. National implementation should ensure that all identifiable stakeholders are included and that testing should be incorporated into the national development process. It was urged that documentation, such as the Blue Book, be made available in French for French speaking African countries.

10. Mr. Arab Hoballah, representing the Mediterranean Action Plan/Blue Plan, presented the activities undertaken in the Mediterranean context. The Blue Plan, as a component of the Mediterranean Action Plan (MAP) launched by UNEP, undertakes studies of the interaction between population, human activities, development and the environment by elaborating a series of trends and alternative scenarios, strengthened by the establishment of a Mediterranean Environment and Development Observatory function, including the development of indicators. The Mediterranean countries and MAP have taken considerable action in follow-up to the Rio process, including the preparation of an Agenda 21 for the Mediterranean Region, MED 21, and the establishment of a Mediterranean Commission on Sustainable Development/MCSD. Establishment of a twinning arrangement between France and Tunisia was noted with the Blue Plan acting as an intermediary. Some elements that were highlighted as priorities for the further work on indicators on the region, included the need for data-comparability, relativity of norms for performance, Indicators for un-sustainable development and a multi partner approach. The selection of indicators will be based on existing concepts, topologies and forms adapted to the region all to be discussed at a series of indicator related meetings between now and 1999.

11. Ms. Marie-Paule Benassi representing EUROSTAT, informed the workshop on their work in relation to the CSD indicators programme. EUROSTAT undertook a pilot study following the CSD methodology using statistics from European Union Member States. The compilation has been made available in the publication *"Indicators of Sustainable Development"* in July 1997, and presents 46 indicators from the CSD list, illustrating trends over time, and comments on trends observed, where relevant. 9 economic, 14 social, 21 environmental and 2 institutional indicators were selected. It was noted that even for the European countries, comparability and uniformity of statistical data, as well as accessibility and availability had been an obstacle in the selection process. Future activities of EUROSTAT include comparison of experiences with the European testing countries and feedback of results for the revision of the CSD indicators and methodology sheets, improvements of data availability and quality of environmental indicators, cooperation with other international organisations and a possible follow-up indicator publication.

VI. Country Reports

12. In order to provide a common starting point for the further discussions, each participating country presented a status report on national implementation. A summary version of these reports is contained in Annex III of the present report.

VII. Results of Small Working Group Sessions

13. The main discussion and exchange of views and information took place in the small working group sessions. The results of these discussions have been synthesized into the main conclusions and recommendations at the end of this report. Please refer to Section XI.

VIII. Status of Related Indicator Initiatives

14. Mr. Peter Bartelmus, representing the United Nations Statistical Division (UNSD), informed participants of their methods of work and current activities under implementation, related to the CSD work on ISDs. A regional workshop on environmental statistics, indicators and accounting was convened in cooperation with the Economic Commission for Africa. A report of the meeting was made available to all participants. Furthermore, work is progressing in compiling environmental indicators from national statistical services based on a core set of indicators, as approved by the Statistical Commission at its twenty-eighth session. As part of the methodological work of UNSD in this field, a "Manual on Environmental Statistics and Indicators" is being prepared. The manual will contain concepts, definitions, classifications, and descriptions of data sources, tabulations and data uses for the environmental indicators specified by the Inter-governmental Working Group on the Advancement of Environment Statistics. It is expected to be completed by the end of 1998. Finally, he informed the meeting of their work on follow-up on the social development themes of recent major United Nations conferences. The United Nations Statistical Commission, at its twenty-ninth session in 1997, endorsed a Minimum National Social Data Set (MNSDS), emphasizing that it should be considered as a minimum list which users can build on to meet national needs and circumstances.

15. Starting with an outlook towards a colourful future of "tools for sustainable development" based on a System of Social Performance Indicators developed and discussed in the Consultative Group on Sustainable Development Indicators, Mr. Jochen Jesinghaus representing Eurostat, presented the latest state of the European Environmental Pressure Indices Project, which aims to treat the environmental component of sustainable development by giving a comprehensive and systematic description of the most important human activities affecting the environment. The project is a corner stone of the Communication from the Commission to the Council and the European Parliament on "Directions for the EU on Environmental Indicators and Green National Accounting" and is closely coordinated with the European Environment Agency (EEA). Methodology sheets similar to the UN CSD format have been developed for 100 pressure indicators. Eurostat plans to publish the first set of 60 indicators in the autumn of 1998. A website for this publication has been installed at: http://www.telecom.es/~tau/enviroindicators.htm (Note: the character before tau is a tilde, ASCII 126). As soon as the indicators become available, a pilot aggregation to a set of ten indices is foreseen. The pressure indices project covers the environmental component of sustainable development in a very systematic way. However, it is obviously tailored to the very complexed policy setting of the EU and thus hardly compatible with the environmental indicators in the CSD menu. Eurostat and DGXI will continue, however, to work in parallel with the CSD list, and attach a high political weight to the CSD process. For example, the first SD indicators publication that had been produced for UNGASS will soon be available in German and Spanish.

16. Ms. Catherine Rubbens of the CSD Secretariat introduced an initiative to develop a set of

indicators for changing consumption and production patterns undertaken in the context of the International Work Programme on Changing Consumption and Production Patterns (IWPCCPP). In this context, the Division for Sustainable Development (DSD) is hosting a Workshop on Indicators for Changing Consumption and Production Patterns on 2-3 March 1998, in New York. The activity of identifying and developing indicators for changing consumption and production patterns is undertaken in relation to both the IWPCCPP, and the Work Programme on Indicators of Sustainable Development of the CSD. It was stressed in the context of both programmes that further work is needed to measure critical trends in consumption and production patterns. Moreover, the CSD called the Secretariat and Governments, at its fifth session, to "develop core indicators to monitor critical trends in consumption and production patterns, with industrialized countries taking the lead". This request was also included in the Programme for the Further Implementation of Agenda 21, adopted by the General Assembly at its Nineteenth Special Session on 23-27 June 1997.

17. Chapter 4 of Agenda 21 is "cross-sectoral", in that it covers various sectors, such as transportation, tourism, energy, waste, agriculture, and water; and allows for links with other elements from Agenda 21, including technology transfer, and trade and environment. Since the Rio Conference, efforts have been made by various countries, organizations, and major groups to strengthen understanding of sustainable consumption and production, and to determine the responsibilities of various actors for changing consumption and production patterns. Key elements of the discussion on the topic are the examination of consumer behaviour impeding sustainable development and ways to change such behaviour, together with the identification of the most effective and efficient policy instruments for addressing unsustainable patterns. The discussions also allow for considering distributional aspects of consumption and production patterns.

18. The challenge of the current activity is to identify a provisional core set of indicators for measuring changes in consumption and production patterns, by reflecting these key objectives for policy development and implementation. For this purpose, consultations were held with partners involved in discussions on changing consumption and production patterns, including policy makers and indicator experts. On the basis of these consultations, the CSD Secretariat prepared a background paper for the Workshop. Participants at the Workshop will include policy makers and experts on changing consumption and production patterns and indicators of sustainable development, from Governments, international organisations, and major groups, such as the business and research communities and NGOs. The outcome of the Workshop, including conclusions and policy recommendations, will serve as an input to the CSD Work Programme on Indicators of Sustainable Development, and the revision of its set of indicators of sustainable development in 1999-2000. The report of the Workshop will be made available to the CSD at its seventh session in 1999, as part of a major review of chapter 4 of Agenda 21.

19. Mr. Bedrich Moldan, representing SCOPE, informed participants of the SCOPE Project on Indicators of Sustainable Development which was initiated in February 1994 by the Czech National

Council of SCOPE. The project's aim was to bring together specialists in the scientific and academic communities at the cutting edge of work on ISDs, to stimulate further research to resolve outstanding problems, and to synthesize results from various research groups for use by policy makers and other users. From the beginning, the project was conceived not as a mere academic exercise, but to operate in close connection with the needs of the international community as outlined by the CSD delegates. The project was intended to support the CSD process in a way that would be acceptable to member countries. SCOPE planned to focus on the scientific aspects of the issue. The political sensitivity surrounding indicators manifest at CSD II, however, altered the course of the project. It became clear that political support needed to be stronger if work on ISDs was to progress in the CSD context and beyond. Moreover, it was necessary if indicators were to be eventually accepted and used at the United Nations level. In order to address the political concerns about ISDs, SCOPE scientists teamed up with the representatives from Belgium and Costa Rica. With UNEP and the UN Division for Sustainable Development, Department for Policy Coordination and Sustainable Development (DPCSD), they organized an international workshop, "Indicators of Sustainable Development for Decision-Making" (Ghent, 9-11 January 1995). Apart from a few experts, the invited participants included government representatives from countries around the world and members of inter-governmental organizations.

20. At the Ghent workshop an important breakthrough was made in the political dialogue about indicators. A fruitful exchange emerged between diplomats and politicians from both developed and developing countries on one side, and scientists on the other. The workshop concluded with a call for increased global efforts to develop ISDs and a mandate for the scientific community to perform a specific role within this process. Following the Ghent workshop, the Government of Belgium presented the workshop reports at CSD III in 1995. This time, the CSD fully embraced the idea of quickly developing an appropriate set of ISDs. The proponents of indicators won a sweeping victory As a result of the CSD decision, a Programme of Work on Indicators of Sustainable Development was accepted that detailed a course for future international work over several years. The SCOPE work was mentioned throughout the decision document, and the role of the scientific community was defined and emphasized. In order to stimulate work and push forward the process within the scientific community, and to begin synthesizing the multifarious approaches to sustainable development indicators, SCOPE organized a large international workshop. This time the project joined with the Government of Germany, which hosted the event. The workshop was held in Wuppertal, Germany on 15-17 November 1995. The Volume "Sustainability Indicators" (edited by Bedrich Moldan and Suzanne Billharz. John Wiley & Sons, Chichester, 1997, 426 pp.) is the culmination of the work of SCOPE scientists over several years. It offers a rich diversity of perspectives and approaches described by more than 50 contributors from many different countries and cultures, working in a wide range of fields and organizations at all levels. It is an overview and the beginning of a synthesis of the most up-to-date work in this area, offering directions for future work and research. It was presented to all delegations of the United Nations General Assembly Special Session, New York, June 1997.

IX. Main Issues Related to linkages and Aggregation

21. Mr. Arthur Dahl from UNEP, described recent developments in linking and aggregating indicators, including materials flows analyses, Geographic Information System (GIS) mapping, and work by the Consultative Group on Sustainable Development Indicators which was developing approaches to highly aggregated indices of sustainable development. Such indices should cover the major dimensions of sustainable development, and should include measures of the state/stock, the flow/trend, and related processes including driving forces and management responses, as in the CSD indicators framework. Indicators could be arranged in nested arrays with ever-higher levels of aggregation, as long as the units and types of measurement were internally compatible. For each parameter, a direction, target, trajectory or model would be necessary to evaluate whether the state and/or trend was more or less sustainable. The results could be signalled on a five point scale ranging from green for fully sustainable via yellow to red for highly unsustainable, when graphic presentations are used or the results are mapped. It is such signals, and particularly warning signals or scales of unsustainability, that can be aggregated most easily in simple indices that flag for decision-makers those areas requiring management action, just as the instruments in an aircraft cockpit signal the flight path and performance of an airplane.

22. These arrays of aggregated indicators can be mapped in circular fashion to the compass directions, with the environmental component of Nature measured in physical units, the Economic component in monetary units, the Social component including institutional dimensions in various social science measures, and the component of individual Welfare in demographic, percent population or per capita units. These four basic components of the sustainable development of human society would need to be linked along another axis to measures of ultimate human satisfaction and well-being that are the purpose of all development, and to the sustainability of the biosphere and its life support systems, upon which human well-being ultimately rests.

23. This conceptual framework should allow the inter-relation and eventual convergence of the various approaches to indicators of sustainable development in a format that can be understood by decision-makers and the general public. It is flexible for use at the local, national or international levels, and can be related to efforts to model the underlying linkages in the human and natural systems. Countries were urged to see how this framework might give some policy-relevant structure to their indicator activities.

24. Mr. Peter Hardi, who provides the secretariat at IISD for the Consultative Group, described the plans of the group to develop this conceptual framework with illustrative examples of aggregate indices, and expressed the offer of the Consultative Group to collaborate with DESA and interested testing countries in supporting the further development of the CSD indicators programme.

X. Phase III of the CSD Work Programme on Indicators of Sustainable Development

25. Ms. Birgitte Bryld, representing the CSD Secretariat, introduced the proposed elements included in Phase III of the work programme on indicators of sustainable development which will be implemented from January 1998 - January 2000. It focuses on the development of the Driving Force - State - Response framework (DSR), possible linkages and aggregation and further refinement of the indicators contained in the current list. Working partners were invited to the Fourth Expert Group Meeting on Indicators of Sustainable Development in October 1997, to review current initiatives relevant to phase III of the work programme, solicit inputs for a longer term strategy and how these parallel programmes may compliment and fit into the CSD indicator process. The meeting proposed an implementation plan for phase III which includes elements such as continuing close follow-up and information exchange related to the national implementation of the indicators programme, revision of the current working list of indicators and methodology sheets, information exchange and follow-up of parallel national and international initiatives and processes also underway to define additional sectoral and cross-sectoral indicators. Work on indicators i.e, in the areas of forestry, land management, vulnerability of small island developing states, biodiversity and changing consumption and production patterns is proceeding and should be incorporated at a certain stage. More work is needed, and will be pursued, to understand the interlinkages between indicators and to integrate their economic, social, environmental and institutional dimensions in more aggregated measures.

XI. Conclusions and Recommendations

26 The participants expressed their gratitude to the Government of the Czech Republic and the European Commission for the organization of this useful workshop. They also thanked the host for their generous hospitality in this beautiful area of their country.

27 The workshop regarded the phase II of the Work Programme on Indicators of sustainable Development as successfully completed by the participating countries, involved organizations within and outside the UN-system and the CSD Secretariat. The workshop furthermore expressed their support of the plan for the implementation of Phase III of the work programme, which will take place from January 1998 - December 2000.

Organization

Focal Points

28. Most countries have appointed national focal points for testing the CSD indicators, but several

have yet to do so. The Workshop recognized that the appointment of a national focal point is crucial for the success of the testing to facilitate the communication and coordination among all participants. Where the national focal point is a political officer, a contact point at the working level could also be identified to maintain regular and ongoing relations internally and with other testing countries and the CSD.

29. In general, national focal points in different countries have been located in ministries of environment, planning, or statistical offices. However, irrespective of location, it is vital that the focal point has close and effective working relationships with all departments and with the CSD national focal point. It was recommended that focal points and DESA maintain close, informal and frequent communication with each other.

National Coordinating Mechanism

30. Participants in the Workshop were encouraged by the successful experiences of some countries in linking the testing to existing national committee structures. These were particularly productive where the national focal point was the secretary or a key player in these committees. In other countries, the indicators of sustainable development (ISD) testing acted as a positive catalyst in the establishment of new mechanisms for the development of both national indicators and national sustainable development strategies.

31. Delegates recognized the need for close coordination of the indicator work with established national statistics committees and programs within Governments and also with indicator-related work done by other institutes and NGOs.

Involvement of Major Groups and Stakeholders

32. The Workshop recognized the need for all government departments to be involved in the development of sustainable development strategies and indicators. It is essential that national environment departments have sufficient authority to support data collection and information gathering where other departments are involved.

33. All participants stressed the need for NGOs, the private sector, and other major groups referred to in Agenda 21, to be fully integrated in the process of developing national sustainable development initiatives. In many cases, they can provide continuity and long term stability for national priorities, independent of changes in national government.

34. In many developing countries, NGOs, the private sector, and other major groups were already involved in the national coordinating committees for environment and sustainable development, and their participation gave added impetus to the national process. In the case of some developed

countries, initial work on ISDs was conducted within government, with the plan that subsequent phases of the work would involve consultations with Major Groups.

Experience with Twinning Arrangements

35. Twinning experiences have taken a variety of forms, ranging from "equal partners" where twinning involved largely sharing and exchanging experiences, to partnerships where one country was providing significant support and advice to enable testing to be carried out by their partner.

36. In many cases, developing countries need technical support and expertise to carry forward indicators development and use, which can be provided through twinning. In addition, they may also need financial assistance, additional resources and possible advisory support to start the process, which could be provided by other international programs.

37. The Workshop recognized that useful cooperation may be fostered between more than two countries. For example, south/south cooperation between two countries with common problems and experience, supported by a developed country could be a useful model.

38. It was suggested that twinning arrangements need not be limited to work on indicators, but could cover broader sustainable development issues.

39. Alternatives to twinning were explored. Suggestions included some countries giving targeted support for particular problems in a second country. There could be considerable benefits to increased sharing of experiences between all testing countries, and this might be done through greater use of the internet, coordinated by DESA. It was recommended that ad hoc partnership arrangements between developed and developing countries to organize workshops for capacity building could help stimulate implementation of the CSD work program on indicators. These partnership arrangements are also useful for the preparation and organization of inter-governmental inter-sessional workshops on ISDs (such as the workshops in Glen Cove, Ghent and Prague).

Implementation

Adequacy of National Institutional Arrangements to Carry-Out an Indicators Programme

40. Several countries expressed the need for a clear mandate or legal framework as a basis on which to initiate work on sustainable development in general and indicators in particular. The complexity of the legal process was cited as a drawback in some countries, but providing a context of enabling legislation could be useful in some specific cases.

41. The process of indicator development was recognized as involving extensive coordination and

consultation among many national government organizations and agencies and put particularly heavy demands on the limited staff resources generally made available for this purpose. In some cases, coordination was complicated by the fact the responsibility for coordination was frequently given to the Environment Ministry, with the implication that sustainable development indicators are considered mainly an environmental issue. It was recommended that Ministries of Planning or other Governmental agencies play a more active role in this process to emphasize the wider government responsibility for indicators of sustainable development.

42. Lack of continuity in support of the indicators programme due to political changes at the national level was cited as a potential problem in some countries. It was recommended that the active involvement of civil society and major groups could help to ensure on-going political support and continuity for the programme. In this regard, broad public awareness, understanding and support for the process was seen as important to the institutional strength and continuity of the national programme. Efforts at public awareness raising were strongly recommended.

Institutional Support

43. Most countries cited the lack of staff resources to effectively carry out the testing process. Additional funding and budgetary support would be useful to strengthen the testing process as well as data collection and other statistical services.

44. Support at the political and decision-making levels was found to be crucial for the vitality and viability of the indicators programme. Keeping key policy and decision-makers aware of and involved in the process was strongly recommended.

Capacity Building

45. All countries identified the need for additional efforts at capacity building and training at the national and local level, including data collection, to support the indicators programme and to support the national use of indicators. It was recommended that international organizations play a more active role in this capacity building effort. Greater support could be provided by the Regional Economic Commissions, UNDP's Capacity 21 Programme as well as the regional programmes, and the regional development banks. Additional resources should be provided to DSD/DESA to help meet the capacity building needs of the testing countries.

46. It was noted that workshops at the national level are an important means to raise the awareness and knowledge of the indicator process by key policy and decision-makers. At the same time, workshops at the local and working level are essential for raising awareness and for gathering new data and information to support the indicator process.

National Strategies and Indicator Selection

47. It was recognized that there is no uniform national experience with regard to the adoption of national strategies for sustainable development. The existence of such strategies or other methods of establishing national priorities for sustainable development was seen as crucial in selecting and testing indicators of sustainable development. At the same time, the use of indicators can contribute to improved policy formulation and priority setting. In this context, the preparation of national strategies and the selection and use of indicators should be based on a broad consultative process involving key government agencies and the public.

Assessment and Evaluation

Assessment of the CSD ISD working list

48. The CSD ISD working list is a good start, as it has built awareness of indicators and of sustainable development issues. Countries need to select those indicators that are relevant to their national priorities and goals. While some indicators may be common to most countries, others may vary in relevance depending on local conditions or levels of development.

49. The Driving Force - State - Response framework may not be as relevant in some countries for social and economic indicators as for environmental indicators. There are also significant gaps in the coverage of issues and in some types of indicators, such as institutional indicators. More measures are needed to cover all relevant sustainable development issues and to promote integration. Countries developing other indicators during the testing phase to fill these gaps should share their proposals so that others can see if they have wider relevance to the future revision of the working list.

Methodology

50. Methodology sheets could be related more closely to user and producer needs, including both shorter summaries for initial review and selection, and more complete descriptions of methods rather than references to other sources that may not be readily available to users. The DESA web site on indicators should include pages for each indicator, with the methodology sheet, and comments and evaluations from testing countries showing which have been selected and the reason for their inclusion or exclusion from the national indicator lists.

51. While the use of standard methods is important, countries with good time series using modified methods should be free to use them, while explaining the difference in method. Reviews of the methods and indicator selection should involve those who may, in particular, have a critical view of new indicators, to build a wider consensus where possible.

Data Availability and Data Gaps

52. Data availability is often a problem, particularly with environmental data where there is no tradition of national compilation, and departments holding data may not be willing to share them. Statistical offices should be more involved in the assessment of data sources and collection of data required for the compilation of indicators of sustainable development. Indicators can help to define clear data requirements. Guidelines for quality assurance of data are needed. Countries should select important indicators even if the data are not immediately available.

Linkages and Aggregation

53. Only relatively few countries have experience with aggregated indices, at this stage. Some relevant examples at the international level includes the work on environmental accounting, the Human Development Index, the European Commissions work on pressure indices and work by the Asian Development Bank. Linkages between economic, social, environmental and institutional sectors need to be further developed. There is a strong political demand for a few key indicators/indices at the national level which may require further work on linkages and aggregation.

Overall Usefulness and Relevance

54. "The overall indicator process has been useful in increasing awareness of sustainable development, and in bringing people together to share information and integrate their activities. It is leading to a better assessment of the status of and needs for information. However, it is not enough just to publish lists of indicators, as they need to be explained and analysed. The process is still far from reflecting progress towards the achievement of sustainable development with all its implications

Reporting Requirements

Friendliness of the Reporting Format

55. Only a few countries have actually used the reporting format at this stage, and further experience and comments would be available as the testing progresses. It was recommended that the format for annual reporting by testing countries be made available in hard, soft and web versions to ensure proper accessibility and use and that the format for annual reporting be made available for direct entry in the web version.

Changes in the Format

56. National focal points may wish to condense the format for internal use, keeping in mind the compatibility with the original format.

57. It was seen as important to go through regular review of reporting requirements for the testing process in order to adapt to national/international needs regarding other reporting requirements on sustainable development.

58. The section in the reporting format related to definitions and methods used should be highlighted, if different from those proposed in the CSD methodology.

59. Reporting on indicators and methodologies should be possible in other UN languages provided additional outside financial support is made available for this purpose.

60. It was recommended to secure, through adequate internal organization, a regular reporting process to the CSD Secretariat.

61. Justification for indicator selection should be reported for each indicator.

62. Where relevant, a regional breakdown of information and data availability should be included in the reporting.

Lessons Learned/Further Issues

63. The indicator development process has promoted the establishment of coordinating mechanisms and cooperation among other agencies and bodies at the national and international level, which has improved the overall knowledge and interrelationship between sectors and institutions at various levels.

64. It was seen as necessary to find an appropriate mechanism to improve coherence between local, national and major groups initiatives in indicator development, where appropriate.

65. Indicator development has been an important catalyst in the debate on major sustainable development issues and a good opportunity to involve NGOs and other partners to increase public acceptability and understanding of indicators.

66. Indicator development has influenced policy identification and implementation both inside and outside the government.

67. The indicator process has been a good opportunity to bring together users and producers of indicators, and therefore deserves increased attention and support.

68. An indicator development process needs highly dedicated people with adequate resources, and clear institutional support, to secure satisfactory implementation.

69. The process needs to evolve from the development of indicators FOR sustainable development, to indicators OF sustainable development through an integrative approach.

70. Taking into account national priorities, it was recommended to review the existing list of indicators to include, where appropriate, other related issues such as consumption and production, transport and tourism.

71. The need for substantial additional resources to support the indicator development process was strongly recommended by all participants, including:

- provision of appropriate technical assistance, where needed, for launching and implementation of the indicators development programme in interested countries;
- encouragement of twinning arrangements with appropriate technical assistance and start-up funding;
- hosting and organizing international meetings related to the issue, in order to promote national acceptance of the process and launching the national coordinating mechanism.

72. Non-testing countries who have parallel indicator programmes should be kept fully informed and involved in the CSD indicator development programme, to the extent possible, to maintain support for the CSD programme and to learn from the experience of other countries in this regard.

73. Similar international workshops, as the presently convened, are highly useful to provide a forum for testing countries to share experiences and results with each other and other partners and organizations involved in the development of indicators of sustainable development.

Fourth International Workshop on Indicators of Sustainable Development

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Fourth International Workshop on Indicators of Sustainable Development

Pruhonice, 19 - 21 January 1998

Chairman of the Workshop – Vladislav Bizek
Co-chairs: Bedrich Moldan, Lowell Flanders, Edwin Barnes
Rapporteur: Nadine Gouzée

Monday, 19 January

09:00 - 09:30 Registration of Participants

09:30 - 10:15 Opening of the Workshop and Welcoming Remarks

Statement by the Deputy Minister of Environment of Czech Republic Vladislav Bizek
Statement by Bedrich Moldan (Charles University)
Address by Lowell Flanders (UN DESA)
Address by Minna Wilkki (CEC)

10:15 - 10:30 Adoption of the proposed Agenda and Election of Officers

10:30 - 11:00

Results of the Fifth Session of the CSD and UNGASS – Lowell Flanders
Status of Implementation of the CSD Work Programme on Indicators – Birgitte Bryld

11:00 - 11:20 - Coffee Break

11:20 - 12:20 Report on the results of regional workshops and regional indicator initiatives

Asia and the Pacific
Latin America and the Caribbean
Africa
The European Commission and EuroStat)
The Mediterranean Region
Discussion

12:20 - 13:00 Brief country reports from each testing country providing status of the testing phase, problems encountered and solutions sought.

Countries in alphabetical order.

13:00 - 14:30 - Lunch

14:30 - 18:00 (16:30 - 16:50 Coffee Break) Brief country reports from each testing country providing status of the testing phase, problems encountered and solutions sought – to be continued

Questions and General discussion, if time permits

19:00 - 21:00 Welcome Party

Tuesday, 20 January

09:30 – 09:40 Plenary session – organizational remarks

09:40 - 13:00 (11:00 - 11:20 Coffee Break) Small Group working sessions based on regional groupings

- the small groups will discuss and prepare conclusions and recommendations on the national testing with particular attention to:

(a) the adequacy of institutional arrangements in the countries to carry out an indicators program, stakeholder involvement, etc.
(b) adequacy of or problems with the CSD methodology
(c) data availability and data gaps
(d) the reporting format
(e) experience from twinning arrangements, where such exists
(f) training and capacity building needs
(g) experience with linkages and aggregation, if any
(h) next steps

13:00 - 14:30 - Lunch

14:30 - 18:00 *(16:30 - 16:50 Coffee Break)* **Plenary reports of small working groups sessions**

General discussion and formulation of overall conclusions and recommendations regarding experience with national testing to date

18:30 – 19:00 Dinner

Wednesday, 21 January

09:30 - 11:00 Reports on the status of related Indicator development initiatives

UN Statistical Department Compilation of environmental indicators and indicators for follow-up to major UN conferences by UNSD (Peter Bartelmus)
EUROSTAT (Jochen Jesinghaus)
SCOPE (Bedrich Moldan)
Discussion

11:00 - 11:20 - Coffee Break

11:20 - 12:00 Main issues related to linkages and aggregation

Overview (Arthur Dahl and Peter Hardi)

12:00 - 13:00 Presentation of Phase III of the CSD Implementation Plan and Discussion (Birgitte Bryld)

Discussion

13:00 - 14:30 Lunch

14:30 - 17:00

Presentation, Discussion and Approval of the Workshop Report

18:00 – 18:30 Dinner

Annex III

Summary of Country Reports submitted to the Fourth International Workshop on Indicators of Sustainable Development

Barbados

Following the Regional Workshop for Latin America and the Caribbean in March 1997, Barbados decided to join the CSD ISD voluntary testing programme based on a recognition of the importance for SIDS of measuring and evaluation tools which provide information for environmental management through gauging environmental change over time. The usefulness of the CSD ISDs was acknowledged through the establishment of a sub-programme within the Sustainable Development Work Programme of the Ministry of Environment for Barbados. The National Commission on Sustainable Development also recognized the importance of the issue and in response thereto established a Steering Committee charged with developing the indicators programme. The 1998 indicator activities focus on involving relevant government agencies in the process, producing position papers on indicators, draft Barbadian-specific indicators, identify gaps in the CSD list, consult with the public and development of a public awareness raising programme. It is expected that by March 1999, a programme for testing of country specific indicators will be developed. It is noted that the development of indicators to date has been hampered by problems of data sources, access and frequency of data collection. Preliminary comments on the CSD list include lack of indicators for reef conservation and health of reef ecosystems as well as the inclusion of vulnerability indices. In addition, suggestions for additional perspectives are made, including indicators for strengthening of major groups, land use management, freshwater resources, protection of the atmosphere, poverty, desertification and institutional and human health issues.

Belgium

In June 1996, the Inter-Ministerial Conference on the Environment (ICE) in Belgium, composed of three regional Ministers of Environment and the Federal Minister of Science, decided that Belgium would be a testing country in the CSD program on indicators. The ICE can be considered as the national coordination mechanism for testing the environmental indicators. The ICE has established a working group which is in charge of the implementation of the test, i.e., reporting on the existing information systems and evaluation of the adequacy and usefulness of methodology sheets of the CSD with regard to the environmental indicators for sustainable development in Belgium. This working group is mainly composed of representatives from the Regional and Federal Environment Ministries. The Federal Planning Bureau, which also takes part to this group, is the international focal point of Belgium. One of the tasks of this group was to identify for each indicator whether the matter covered by the indicator was under federal or regional

responsibility. This was important, in particular since data and ways to calculate the indicator may vary from one region to another. The group concluded that data are, in principle, immediately available for 21 of the 57 environmental indicators of sustainable development. In November 1996, Belgium started the testing with the in-depth analysis and filling-in of the methodology sheets of three indicators. Main conclusions of this exercise are that the methodology sheets approach can help the country to measure sustainable development needs and focus national attention on improving availability of data for the implementation of Agenda 21 and that two of the indicators considered provide considerable information at the international level as a global evaluation and comparison tool, but that they are not precise enough to pilot the national policies and strategies. It was also concluded that the implementation process of the testing was more time-consuming than anticipated. Broader participation of major groups in the testing process will depend on the level of human and financial resources allocated to it by all departments concerned. According to a decision taken by the ICE working group, the Federal Planning Bureau, which is also focal point for the testing of ISDs, has completed the Format for Reporting on Progress of the National Testing of Indicators, required by the CSD to assess the implementation of the testing of indicators of sustainable development.

Bolivia

The Government of Bolivia is preparing a National Plan of Social and Economic Development the strategic lines of which have, as a fundamental paradigm, integral sustainable development and poverty alleviation as main objectives. Therefore, adequate measurement instruments as to monitor the application of the plan was seen to be of fundamental importance. The national testing of indicators in Bolivia is still in its preparatory phase as part of a broader project to create a National System of Information for Development (SNID). The idea of SNID is to have a focal centre to register all information sources to facilitate access to information produced in the country, which is presently not recorded, primarily resulting from research made by NGOs and universities, as well as development projects which produce information to monitor and evaluate their results. A series of activities in the context of SNID is under implementation including development of the conceptual framework and possible indices and their reliability among others for monitoring the application of the national plan. The indices will undergo testing and follow-up reports will be prepared of development and application of both SNID and the indices.

Brazil

The testing of ISDs in Brazil will be developed by networking state level agencies through the National Environmental System (SISNAMA) and organized within the National Integrated Environment Monitoring Program (MONITORE). From 1998-1999, the Ministry of Environment, Water Resources and Legal Amazon (MMA) will be developing MONITORE via funding, provision of technical skills and inter-agency cooperation to help overcome the present gap between state agencies in the experience with monitoring sustainable development indicators. An inventory of the

available data and methodologies will be produced with the Brazilian Geographical and Statistics Institute (IBGE), as a starting point for the testing process. A first inventory of the available data sources and a directory of institutions working on environmental monitoring will be finalized by April 1998. This information will be made available at the MONITORE homepage on the internet. A second step includes testing of the proposed methodology and indicators mainly from the environmental cluster. The final selection of indicators for testing will be discussed and agreed by the state agencies. It is expected that the Brazil-Germany twinning arrangement will be essential for speeding up this review process.

China

The lead group for the testing of ISDs in China was established, consisting of the National Environmental Protection Agency (NEPA) and the State Statistics Bureau (SSB). Furthermore, a working group of experts from different research and educational institutions was established. Phase I of the national testing has been set out based on initiatives in indicator development already undertaken in the national context. This initiative includes a proposed Green GNP, a set of urban environmental, economic, social and institutional indicators, local case studies, etc. Phase I of the national testing will therefore include a summary of past studies and endeavours in this field, selection of national indicators for testing and the planning of a national workshop. Problems identified to date include: the methodological adaption to the practical situation in China and regional differences in applying them; applicability of indicators due to the difficulties of aggregation and high cost of testing; data availability and quality; financial constraints and the need for a strengthened coordination mechanism. Future needs identified include: awareness building among Government officials and the public; capacity-building to promote the studies and testing of ISDs; financial resources and technical assistance as well as further exchange of information and cooperation at the national level.

Costa Rica

The Government of Costa Rica, under the coordination of the Ministry of National Planning (MIDEPLAN), has promoted over the last three years, two capacity-building initiatives for sustainable development advancement, with implications for the implementation of indicators of sustainable development. First, the organization of a National System for Sustainable Development (SINADES), and second, the creation and consolidation of a National System of Indicators of Sustainable Development, known as SIDES (SIDES- Sistema de Indicadores sobre Desarrollo Sostenible). These initiatives have led to the consolidation of a large data base which includes economic, social and environmental data. The National System for Sustainable Development has been conceived as a mechanism to articulate strategies, policies and actions within the Costa Rican public sector, oriented to the promotion of sustainable development. The SINADES initiative has been advanced with the support of a technical cooperation project funded by the Inter-American Development Bank (IDB). This project includes two main activities that have contributed to create capacities for

the implementation and use of indicators of sustainable development. The first is training, oriented to promote changes in attitudes, through workshops, courses and conferences focusing on sustainable development topics, including ISDs. The second is institutional strengthening, which include activities related to: (a) the definition of operational procedures and legal instruments to institutionalize SINADES; (b) the creation of a networking mechanism, to facilitate exchange of information and promote interaction; (c) the development of indicators of sustainable development and the definition and consolidation of institutional arrangements for their implementation; and (d) the consolidation of a National Geo-Computing Center. SIDES is a work program of the Government of Costa Rica for the design and implementation of Indicators of Sustainable Development, lead by MIDEPLAN. Over the last two years, activities have concentrated on three processes. First, the construction and consolidation of a large data base located at MIDEPLAN. Second, the creation of a network of data providers in public and private organizations to support such data base. And third, the creation of institutional capacities within MIDEPLAN for making of SIDES a "sustainable" process within the Costa Rican public sector. Finally, note should be taken of the consolidation of a National Commission on Information for Sustainable Development by a Presidential Executive Decree and the creation of an Observatory of Development at the University of Costa Rica.

Czech Republic

In the Czech Republic, the international process of testing the sustainability indicators is seen as a part of a broader process of building up a national comprehensive information system on sustainable development. This process is lead by environmental institutions as the Ministry of Environment (MoE), Charles University Environmental Center and the Czech Ecological Institute (CEI); a small expert Working Group on Sustainability Indicators was established at the onset of the project. A designated Focal Point – currently at the Charles University Environmental Center – has been working in a close cooperation with other institutions, namely the Czech Statistical Office. In order to get a political mandate for the forthcoming phases of the project, the Focal Point might be transferred to the MoE. The Working Group has worked out and submitted to the MoE a draft list of sustainability indicators including the reference to the basic CSD indicators, information on the applicability of proposed indicators, relevance to the Czech Republic context, and data availability. A debate on the sustainability indicators has not received broader attention so far – it remains a domain of the experts from various mostly environmental organizations. More activities and broader interest can be observed at a local level – a few municipalities have launched their strategic planning efforts that include sustainability indicators in some cases. The MoE has recently granted the IBM Company to build up a comprehensive information system using the sustainability indicators that will be operated by the MoE and widely accessible via the Internet; the debate on the contents, formats of outputs, access, users, etc., is under way. Several bottlenecks in the implementation has been identified. The debate on the sustainability indicators has not reached other important sectors (transportation, industry, agriculture, etc.); there is no multisectoral body that would coordinate and make decisions at the top political level; The testing process has not made a

great deal of progress yet – an evaluation of usefulness of the indicators, assessment of the aggregation and linkages between different aspects of sustainability, etc., are the most pressing topics to be done; Any effective work to involve as many stakeholders as possible in the process has not been done; The entire testing process is still driven more by the international commitments of the Czech Republic than by the real effort of the Czech citizens (both the politicians and the public) to measure and embark on the sustainable development path.

Finland

The Government of Finland established the Finnish National Commission on Sustainable Development in June 1993 which aims at promoting the national implementation of sustainable development. This Commission has set up a network of different Ministries and organizations with the task to coordinate the development and testing of indicators in 1996. The CSD indicator testing in Finland started in January 1997. A special data collection sheet was developed for testing purpose. A group of 12 people from different Ministries and research institutions took part in five workshops, where the data sheets were evaluated. By the end of spring 1997, all indicators were preliminarily examined, and 57 were chosen for testing and reporting on the basis of clearly defined selection criteria. During the summer of 1997, the data was collected with the data collection sheets. The results were presented to a larger audience during a seminar in September. Then, the CSD indicator sheets were filled out for the selected indicators, and a final report was submitted in 1997. In the future, Finland will concentrate on developing its own National Set of Sustainable Development Indicators, of which some might be taken from the CSD list, though other new indicators will be introduced as well, in accordance with the countries national goals, targets, and priorities. Finland and South Africa have agreed on twinning in the testing process. The nature of twinning has been the exchange of information and expertise. The delegates and experts have met three times. Some reasons for success of the indicator testing in Finland were considered the fact that Statistics Finland was involved in the process from the beginning, that the testing process was well organized from the start, and that data could be acquired free of charge. Some confusion was caused by the fact that there was uncertainty as to whether one needed to select indicators for national purposes or indicators for international comparison.

France

The French testing of the CSD ISDs is coordinated by the Ministry of the Environment with the French Institute for the Environment (IFEN) as Focal Point. The testing is organized with two phases and two working groups. A technical testing by the 'technical group" is undertaken to evaluate the ability of the French statistical system to compile the indicators, compare between national and UN calculation methods and specifications and finally, evaluate the quality of the methodology sheets. The political test is focused on evaluating the relevance of the indicators in the national context and their usefulness for decision-makers. This is done by the "political group". The

technical test has been based on a questionnaire prepared based on guidelines provided by DPCSD sent to experts identified among national institutions in charge of data collection, compilation and analysis. Only 8 indicators were not appraised due to their lack of relevance for France, or as they were under preparation. The political test was based on a questionnaire including a partial translation of the "blue book" to provide an overview of the indicators and more synthetic information and focus on definitions and policy relevance. All 134 indicators were appraised by experts from the French Commission on Sustainable Development, an interministerial group involved in the discussions of sustainable development, the scientific community and NGOs involved in development and environment. Obstacles encountered in the implementation of the national testing included the difficulty of mobilizing experts, assessing the policy relevance of the working list taking both national and international comparability into account and finally, difficulties in specifying the relationship between indicators selected and the National Sustainable Development Strategy. Some criticisms to date include: the lack of integration in the framework of the different dimensions of sustainable development; the low relevance of establishing a single selection of indicators for all UN member countries; and the human and financial resource requirements to carry out the testing. A twinning arrangement with Tunisia has recently been established which was facilitated by the Blue Plan. A first report on this process is expected by July 1998.

Germany

In Germany, the first year of the testing phase has focused on two major aspects: The first is setting up the organization/consultation mechanism that is coordinated by the Federal Ministry for the Environment. This includes an interministerial working group of all federal ministries; a coordination team consisting of the Federal Environment Ministry, the Federal Environment Agency and the Federal Statistical Agency; a National Indicator Committee with 23 representatives of relevant major groups and, an indicator expert team of 20 scientists from different disciplines in order to achieve an active integration of all relevant groups from the beginning. The representatives of the National Committee and the Expert Group were asked to comment on the CSD working list and will be consulted in the drafting of the final interim report of the testing. The second aspect has been the selection of issues and indicators to be tested. This selection is of prime importance when analyzing the CSD working list, and is done in the light of the political relevance and adequacy for Germany. As the selection will be done according to national priorities, new issues and therefore indicators, will be added to the current CSD list. In 1998-1999, the national testing will focus on elements such as data work (production of time series for selected indicators), the development of methodologies for newly proposed indicators including comments on methodologies in the "blue book", assessment of selected indicators with regard to policy oriented usefulness and inter-linkages, proposals for "better" indicators, methodological aspects of aggregation etc. and finally, the twinning arrangement with Brazil which includes the organization of a workshop in Brazil in 1998.

Ghana

Ghana decided to join the testing of the CSD indicators of sustainable development after having hosted the African Regional Workshop in Accra in June 1997. It is realized that a number of agencies are currently engaged in indicator development activities covering the field of social, economic and environmental development. However, none of these are integrated sustainable development activities and participation in the CSD programme is meant as one way to address this issue. A National Committee on Indicators of Sustainable Development involving all crucial stakeholders for sustainable development has been formed. The Committee will identify appropriate indicators for use in the country and monitor the national indicators programme. In pursuing its activities, the Committee endeavours to attach the testing activities to various sustainable development initiatives such as the Ghana Capacity 21 Programme and the Poverty Reduction Programme. It is anticipated that the major problems to be encountered will be in the areas of capacity, reliability, quality and timeliness of data. Ghana hopes to enter a twinning arrangement with another country to share experiences in its indicator testing programme.

Kenya

The national testing of indicators of sustainable development is organized so that the National Environment Secretariat (NES), a department within the Ministry of Environment and Natural Resources, acts as the Focal Point. NES is charged by the Government to coordinate all matters pertaining to the environment. This coordinating role is carried out through the Inter-Ministerial Committee on Environment (IMCE) which has created a sub-committee on Environmental Economics and Accounting responsible for the development of indicators, among other issues. Membership includes government ministries, departments of planning and statistics, academic and research institutes, NGOs and the private sector. At the international/regional level, Kenya has no close working partnerships in this area, but is searching for a twinning arrangement to assist with the development and implementation of the indicators programme. Activities within the indicators programme include the identification of data needs. The Government convened with the assistance of UNDP in Kenya, an environmental data needs assessment workshop to facilitate the process of preparing indicators for monitoring and evaluating the achievement of sustainability. Based hereon, the sub-committee identified a number of gaps and needs including: technical and financial resources, data availability and access, national and international networking and awareness at all levels of the importance of ISDs. Future plans include: awareness and capacity raising in all government departments; the identification of networking modalities in data and indicator development, identification of priority areas for testing of ISDs given the regional disparities; and soliciting financial aid for the programme.

Maldives

Maldives has established a National Coordinating Mechanism which comprises representatives from the relevant governmental organizations, NGOs and Major Groups. The Ministry of Planning, Human Resources and Environment has the overall responsibility for the implementation of the testing programme on national indicators of sustainable development. Among the activities planned is a first national workshop to identify relevant indicators, from 1-3 March 1998. The workshop will be convened with the financial support and expert advice from ESCAP. Future plans for the national implementation will be reported at a later stage.

Mexico

In Mexico, several steps are being taken to improve and systematize environmental information. Among these actions, the main is the Agreement of Collaboration between the National Institute of Statistics, Geography and Informatics (INEGI) and the Ministry of the Environment (SEMARNAP), signed in 1995. This institutional arrangement has facilitated the elaboration of a second compendium on environmental statistics currently in printing thereby creating a point of departure for launching an initiative to conform an Inter-institutional Committee whose function would be to coordinate the harmonization, collection and systematization of the environmental information. Furthermore, greater interaction has been created among federal ministries and other public agencies, and the production of environmental and sustainability indicators, making use of methodology sheets and the OECD framework, has been strengthened. In addition, a National System of Information on Environment and Natural Resources to be implemented in the long run has been designed. At this point in the process, it was concluded that the data availability in Mexico is improving, resulting in the release of several reports on the state of the environment, etc. The initiative to harmonize part of the environment statistics and indicators to the methodologies on sustainable development is still in its initial phase. The development of a joint work programme on ISDs by SEMARNAP and INEGI is underway and training workshops, etc. are being developed to reinforce the capacity building aspect

Morocco

Values for a number of indicators are published regularly in the country for the large part in relation to national priorities of the Government. Indicators include access to health and basic services and indicators of poverty. It is of priority in the country that the indicators reflect differences between the urban and rural population as well as different groups of society.

Philippines

Following the Regional Workshop for Asia and the Pacific in late 1996, the Philippines has

begun the elaboration of a national testing programme for ISDs with the assistance of ESCAP. The Philippines Council on Sustainable Development (PCSD) will serve as the coordinating mechanism for the process. Undertaking this initiative builds on an ongoing effort in the country to develop a national set of indicators commissioned by the UNDP-funded Integrated Environmental Management for Sustainable Development (IEMSD) Programme. Activities undertaken in this context include a review of initiatives to develop sustainable development indicators; the formulation of a framework and system of ISDs to aid the monitoring of compliance with Philippine Agenda 21; and finally, a pilot test of the proposed indicators using recent Philippine data. A series of consultations and workshops were conducted involving the Government, academia, research institutions and NGOs. A final report of the study is intended as a sourcebook on ISDs and is now in the final stages of printing. One result of the process is a selection of 153 indicators for the Philippines presented in the pressure-state-response framework. A workplan for the national testing of these indicators has been prepared by the PCSD Secretariat and includes elements of organization, implementation, evaluating and reporting activities.

South Africa

South Africa, through its Department of Environmental Affairs and Tourism, has agreed to assist the CSD in the testing of the working list of sustainable development indicators. The testing was initiated in February 1997 after the Committee for Sustainable Development agreed to the process to be followed. It was felt that collection of all available data for the CSD indicators would be beneficial to CSD indicator development as well as a good platform to contribute to a National State of the Environment Report for South Africa. Institutions, including NGOs, that operated at the national level, were invited to participate in the process. A questionnaire was designed to obtain in a structured format, information on the relevance of indicators, comprehensibility of the methodology sheets, and the international comparability of the data. It was concluded that there was a general need for raising the awareness of the usefulness of the indicators, which was mainly addressed via information packages on the programme. Further activities in this area still have to be developed. One aim of the first year of testing was to obtain data sets on indicators already in use in South Africa. This effort was seen as far more time consuming than anticipated. In preparation of the first annual report, data has been tabulated, and where possible, time series data are presented in a graphical format. A few indicators are also available in geo-referenced format. In terms of the organization of the testing, a twinning arrangement was established with Finland in early 1997 which has been highly successful to date. The nature of cooperation has primarily been exchange of information and ideas including the convening of several meetings in this context. The results of this experience will be reflected in a joint report submitted to the CSD. The continuation of the testing process is subject to the availability of both human and financial resources. Should the programme be continued, four focus areas should be pursued. These include the hosting of sectoral workshops to discuss in more details the proposed indicators and methodology sheets; the publication of data sets collected during the first year of testing; the

development of a sustainable development home page on the internet where results of the testing would be reflected; and the development of a comprehensive communication strategy with regard to the ISDs and the testing process.

United Kingdom

The work on the UK pilot is being carried out in three phases. Phase I involves the testing of a selection of the UN-CSD indicators in the UK. Phase II concerns the evaluation of the indicators to be tested, and Phase III the reporting to the UN-CSD. A considerable number of organizations, both within and outside Government, has been consulted during the course of the UK pilot process so far. Phase I has been completed and a provisional list of 51 indicators have been selected for testing. Work relevant to Phase II for many of the selected indicators is well advanced, but there is a considerable amount of work still to be done for the formal and systematic evaluation and reporting process. This will be completed in 1998. The final phase will be to produce a report, including where practical, the indicators themselves and commentary about the values, trends, particularly in relation to nationally or internationally agreed targets and commitments. The report will also include commentary on the relevance, construction, and ease of collection of the individual indicators. It is anticipated that this final phase will be complete by the end of 1998. The process has been facilitated by the fact that a number of mechanisms through which the Government consulted and received advice on sustainable development was already in place, through the existence of the UK National Strategy and the 1996 national set of indicators, and the availability and feasibility of the collection of data.

Venezuela

Venezuela is participating as a pilot country for the testing of indicators of sustainable development, for which the Environmental Statistics and Information Centre acts as a focal point. The centre is part of the Directorate of Environmental Information of the Ministry of the Environment and Natural Renewable Resources. For this pilot project, 33 indicators from the CSD working list which were relevant to national priorities were selected for testing. Due to time restrictions, only 13 of the 33 indicators were tested and will be reported on according to the indicator report sheets. The tested indicators cover social, economic, environmental and institutional indicators. The effort of testing ISDs is part of a broader effort to develop an Environmental Information System whose primary objective is to provide an integrated and accessible environmental data base, designed to facilitate the acquisition, compilation and analysis of data required to complement the environmental impact assessment and environmental quality monitoring project activities.

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Item 8 of the provisional agenda*

OTHER MATTERS

Letter dated 30 March 1998 from the Permanent Representative of France to the United Nations addressed to the Secretary-General**

I have the honour to transmit to you herewith the Final Declaration and the Programme for Priority Actions (English and French texts), adopted by the International Conference on Water and Sustainable Development, which was held in Paris from 19 to 21 March 1998 (see annex).

I should be grateful if you would have these texts circulated as working documents of the sixth session of the Commission on Sustainable Development, which will be held in New York from 20 April to 1 May 1998.

(Signed) Alain DEJAMMET

* E/CN.17/1998/1.

** The attachment is being issued in the languages of submission only.

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ANNEX

INTERNATIONAL CONFERENCE
WATER AND SUSTAINABLE DEVELOPMENT

- PARIS - 19-20-21 March 1998 -

PROGRAMME
FOR PRIORITY ACTIONS

• I - IMPROVING KNOWLEDGE OF WATER RESOURCES AND USES FOR SUSTAINABLE MANAGEMENT

❑ I - A - ESTABLISHING AND IMPROVING INTEGRATED SYSTEMS FOR MONITORING WATER RESOURCES, THEIR USES AND ECOSYSTEMS

Within the framework of official development assistance, a high priority should be given to the strengthening or establishment of local, national or international integrated water information systems (collection, analysis, management and dissemination of data on water quantity and quality, and its availability and uses in the various water sub-sectors), in order to mobilise the necessary information for water resource and ecosystem management, use regulation and protection against point or non-point pollution and prevention of crisis situation.

A better assessment of the resource, the different water uses and of their efficiency (domestic water, irrigation, industry, hydroelectricity, transport, leisure, fishing, aquiculture, and so forth) is essential.

O I-A-1 - STRENGTHENING AND ESTABLISHMENT OF INTEGRATED INFORMATION SYSTEMS

Integrated information systems should be developed on various scales, ranging from local to global, and include all parameters necessary for the integrated and sustainable management of water and ecosystems. They should be structured in the form of long-term monitoring systems at the different relevant levels, particularly for large river and lake basins, and aquifers.

Such information and data have a fundamental economic value for assisting in the management and use of water resources, and in the protection of the environment.

The sustainability of such monitoring systems is the responsibility of each Government, which must also make sure the quantity and quality of information is improved.

O I-A-2 - DEVELOPMENT OF DATA EXCHANGE

Priority should be given to the national and international standardisation of definitions, development of user-friendly formats, and information access and exchange.

❑ I - B - TRENGTHENING REGIONAL, NATIONAL AND INTERNATIONAL PROGRAMMES FOR ACQUIRING FUNDAMENTAL KNOWLEDGE OF WATER RESOURCES AND THEIR USES:

o I-B-1 - UNDERSTANDING MAJOR TRENDS AND THEIR IMPACT:

In order to improve research capacities, international scientific, institutional and technical co-operation should be strengthened to develop concepts along with indicators and common methodologies, particularly as concerns the characterisation of:

(a) reliable and "usable" resources, that can be used in a sustainable water management framework, on the basis of rational demand management.

(b) different consumptive or non-consumptive water uses in the basins, their evolution and efficiency,

(c) point and non-point pollution sources,

(d) the condition (water quality and quantity) of aquatic ecosystems, rivers, lakes, wetlands, groundwater,

(e) eutrophication and biological degradation of rivers, lakes and reservoirs,

(f) extreme meteorological and hydrological events (floods, droughts),

(g) economic and social value of ecosystem functions,

(h) the modification of the watercourse flow regime and the functioning of aquifer systems caused by infrastructures, withdrawals and discharges,

(i) changes in land use and soil degradation, biological diversity and living aquatic and terrestrial resources.

Because women have a particular role in utilising and conserving water resources on a daily basis, their knowledge and experience should be considered as a component of any sustainable water management programme. Information systems should rely on data collected and analysed in such a way as to reflect the role of women.

The users of water-related information must be associated with data collection in order to facilitate their understanding of the impact of local actions on the resource and their involvement in defining solutions for sustainable protection of this resource.

Prospective studies should be carried out on water resource availability (both quantity and quality) and changes in water demand in order to provide

information to assist in identifying potential serious water crises. It is particularly important to be able to assess the interaction between inland freshwater resource management and other major environmental issues. These include desertification, climate change, deforestation, soil degradation, biodiversity, and impacts on downstream coastal ecosystems. It is necessary also to make a connection between water, health, sufficient nourishment and poverty of the populations.

O I-B-2 - FACILITATING REGIONAL AND INTERNATIONAL COOPERATION TO IMPROVE KNOWLEDGE:

In order to improve knowledge, it is necessary to reinforce regional and global programmes, that will rely, whenever possible, on national programmes. Considering their geographic coverage and their aim, some of these programmes should be financially supported while appropriate co-operation could deal with other national programmes.

Some on-going international programmes are mentioned hereafter:
(a) the « Eurowaternet » network of the European Environmental Agency,
(b) the Euro-Mediterranean Water Information System (EMWIS),
(c) the Global Runoff Data Centre (GRDC) and the World Hydrological Cycle Observing System (WHYCOS), both of which fall within the Operational Hydrology Programme (OHP) of WMO,
(d) the Flow Regimes from International Experimental and Network Data (FRIEND) within the International Hydrological Programme (IHP) of UNESCO,
(e) FAO's AQUASTAT on the agricultural uses of water,
(f) GEMS/Water programme of UNEP, WHO and other co-operating United Nations Agencies and others, should be strengthened so as to ensure regional up-to-date and accurate coverage.
(g) the aquifer programme of the large SSO basins, with African countries and other organisations concerning deep water resources in Africa.
(h) developing actions for the prevention of natural catastrophes, initiated during the International Decade
(i) OMS/UNICEF joint monitoring programmes of drinking water and sanitation.
(j) the inter-American water network of the Organisation of American States.

❑ I - C - NETWORKING WATER DOCUMENTATION SYSTEMS

The following activities should be promoted:

- collection of documentation and wide dissemination to all stakeholders, in order to promote in-service training of the sector's professionals, disseminate new knowledge, and enhance public awareness of important water-related issues (e.g. social, health, environment, institutions, technology, economics). Such documentation should also be made available in a form that can be both understood and used by decision-makers and the general public alike.

- creation of interlinked and widely disseminated systems for exchanging institutional, economic and technical documentation, as well as baseline information, such as directories of organisations and lists of experts and specialists, acting as a

network between « documentation centres » focusing on specific water-related topics.

- development of compatible references, protocols for computerised exchange of documentation and multilingual approaches, as well as the management of the network and the training of documentation specialists.

● II - PROMOTING HUMAN RESOURCES DEVELOPMENT AND INSTITUTIONAL CAPACITY BUILDING

This topic deals with both:

- integrated management of water resources, and
- services for the supply and use of the resources, including sanitation.

As the Harare experts group meeting recalled, an integrated approach requires a significant reinforcement of institutional and human capacities at both national and local levels in a complementary manner, associating civil society at each of these levels.

These actions require, to be effective and durable, strong political will and long-term financial commitment.

❑ II - D - INSTITUTIONAL CAPACITY BUILDING

o II-D-1 - ROLE OF PUBLIC AUTHORITIES

In order to improve management of the water sector, it is important to support integrated and multi-year projects for the establishment and improvement of administrative, financial and technical frameworks. These projects should take into account the specific needs, capacities and culture of each country and address in particular:

- **II-D-1-1** - adequate legislation and regulations for an integrated management of water resources and the means for their enforcement,
- **II-D-1-2** - management agencies, that already exist or are to be set up, together with a precise definition of their responsibilities and financial resources,
- **II-D-1-3** - institutional bodies and procedures enabling the participation of local authorities, representatives of users and civil society in decision-making, projects specifications and programmes, including women, nomadic populations and the poor.
- **II-D-1-4** - detailed studies of master plans for long-term water development and management, at the level of large river basins or aquifers in particular,
- **II-D-1-5** - elaboration of multi-year priority investment programmes at a national level that take into account « user-pays » systems and the « polluter-pays » principle, and capacity to pay.

O II-D-2 - ROLE OF LOCAL AUTHORITIES

Devolution to local authorities of responsibilities for organisation and management of public water supply, sanitation services and irrigation systems should be encouraged. The following objectives merit particular attention:

- **II-D-2-1-** Improving the decision-making capacity of local managers,
- **II-D-2-2-** Facilitating exchange of experience between managing agencies,
- **II-D-2-3-** Improving the economic and technical efficiency of the services.
- **II-D-2-4-** Promoting local initiatives.

O II-D-3 - PARTICIPATION OF CIVIL SOCIETY

The participation of civil society and the general public in the planning, design and funding of programmes requires:

- **II-D-3-1-** access to information and its dissemination by the media and educational systems in particular,
- **II-D-3-2-** the training of those involved in the decision-making process, including leaders of village communities, irrigation water users' associations and non-governmental organisations/associations,
- **II-D-3-3-** the promotion and co-ordination of initiatives within organisations that have the necessary expertise and capacity for advocacy,
- **II-D-3-4-** the full involvement of local communities and women -who play a key role-; raising awareness of children, starting at primary school.

It is recommended that a significant share of official development assistance for large infrastructure, equipment and institutional reform projects be allocated for the promotion of these activities.

O II-D-4 - IMPLEMENTATION OF MANAGEMENT TOOLS FOR TRANSBOUNDARIES FRESHWATER BODIES

Considering inter alia the relevant chapters of Agenda 21, the Rio Declaration, and the programme for further implementation as adopted by the U.N. General Assembly, riparian states are encouraged to co-operate among each other on matters relating to transboundary water resources, taking into account the interests of all states concerned. To this end, it is desirable inter alia to:

- promote the exchange of reliable and comparable information between riparian countries,

- develop dialogues at all levels, including at the level of the relevant international institutions and arrangements whenever appropriate,
- define priority action plans of common interest to be implemented in order to improve water management and pollution control.

There are more than 215 transboundary rivers in the world. The action of bi- and multilateral donor institutions in the field of transboundary freshwater resources development and management should be enhanced and facilitated.

The Global Environment Facility should take into account this Priority Action Programme under its existing relevant focal areas to build body-based operational program activities which meet Global Environment Facilities guidelines.. In particular, capacity-building projects should include action in support of dissemination of information and awareness raising among political and technical decision-makers and to support preliminary feasibility studies at the national level where these are consistent with overall national development strategy in the countries concerned.

o II-D-5 - COLLECTION AND DISSEMINATION OF ECONOMIC INFORMATION :

We should strengthen studies which aim to improve knowledge of water costs in the different uses, to monitor performance and to provide economic indicators at national and regional level, taking into account the interests of the states concerned,

Monitoring mechanisms should be developed or established on an appropriate scale. In order to define and standardise their methods, to disseminate and compare their results, on a voluntary basis, they should have sufficient means to carry out these programmes and research and facilitate their co-ordination in international co-operation networks.

❑ II - E - HUMAN RESOURCES DEVELOPMENT

Among the different aspects of human resources development, that of the multidisciplinary and multisectoral training and information of both professionals and users in the water sector is a prerequisite for the optimum use of water resources and the cost-effectiveness of facilities.

o II-E-1 - VOCATIONAL TRAINING FOR PROFESSIONALS

Funding in this field should progressively and significantly increase.

In-service vocational training can only be sustained through funding by public and private employers in the water sector.

Particular attention should be paid to the training of women at all levels.

ODA should give priority to the establishment and development of regional training focal points, while developing as a first step the educational capacities of existing training institutions.

Depending on requirements and situation, this could be implemented by setting up training institutions specialised in technical and managerial aspects of the water sector at a national or regional level.

The training of trainers and the development of necessary educational materials could be promoted by organising these training institutions into networks.

• II - E - 1-1 - TRAINING OF HIGH-LEVEL PROFESSIONALS

The formulation and implementation of water policies based on the principles of integrated water resources management, require the appropriate training of high-level professionals.

• II - E - 1- 2 - TRAINING OF OPERATORS

Training the least qualified staff (who represent the majority of workers in the sector) by using appropriate in-service training methods should be given a high priority.

Vocational training leads to the improvement of:

- operating conditions, maintenance and rehabilitation of community networks and installations, for reducing leakage and monitoring water quality,
- administrative organisation, and management relations with users in water community services and administrations.

o II-E-2 - RESEARCH AND TRANSFER OF TECHNOLOGY :

National and regional research programmes linked to higher education, especially these relating to integrated water and land management in watershed areas and the functioning of water-related ecosystems, should be developed.

Exchange of know-how and technology should be promoted, including among developing countries, taking into account indigenous technologies.

The international community has a particular responsibility in this field.

o II-E-3 - AWARENESS, INFORMATION AND EDUCATION OF USERS :

Water management is not only the responsibility of the professionals of the sector but also increasingly involves all the users and local populations.

Water and land users alike should be made more aware of issues relating to wastage control, the economic, social and cultural value of water, prevention of water-borne diseases and pollution, soil erosion and environmental protection.

This requires a global and transdisciplinary approach integrated into the culture, know-how and traditions of local populations.

Specific actions should be strengthened to enable women to participate fully and equitably in the formulation and management of projects.

● III - DEFINING STRATEGIES FOR SUSTAINABLE WATER MANAGEMENT AND IDENTIFYING APPROPRIATE MEANS OF FINANCING

❑ III - F - FORMULATION AND IMPLEMENTATION OF SUB-NATIONAL, NATIONAL AND REGIONAL STRATEGIES

Countries that have not yet formulated sub-national or national strategies for the water sector should be encouraged to do so while identifying medium and long term priorities. These strategies will provide a coherent framework governing the actions of the different elements of the public and private sectors. Regional strategies should be developed as necessary.

Existing strategies should be regularly evaluated and updated.

The implementation of these strategies should meet the requirements for integrated water resources management and include the adaptation and modernisation of institutional, legislative and regulatory frameworks; the improvement of knowledge of resources and uses; and the training of executives and technicians in service management and equipment maintenance.

It is recognised that water is a key natural resource for future prosperity and stability and emphasis could be given to mechanisms and instruments to support the use of water as a catalyst for regional co-operation rather than a source of potential conflict.

❑ III - G - MOBILIZATION OF FINANCIAL AND OTHER RESOURCES

o III-G-1 - MOBILISATION OF NATIONAL AND LOCAL RESOURCES

Water planning and management need to be taken into account within a socio-economic development context while recognising the vital role of water in the fulfilment of basic human needs, food security, poverty alleviation and the functioning of water-related ecosystems. Specific conditions of non-monetary sectors of the economy should be taken into account.

Incentives to improve use and protection of water resources, pricing and financial, as appropriate, should be developed. Access to traditional water resources should be protected.

We also need to explore ways and means of facilitating a gradual transition towards full cost recovery to the extent possible, taking into account the essential role of water in meeting basic human needs. Subsidies, or other appropriate transparent financial mechanisms, for specific groups, in particular for people living in poverty, might be considered in some countries.

Transparency in economic and financial management of services is a precondition for effective cost recovery.

The implementation of actions to reduce costs, such as improving management, competition between operators, leakage reduction and use of appropriate technologies, could reduce overall funding requirements.

To seek that, after comprehensive public debate among all stakeholders, the various functions of sustainable water management are funded, appropriate frameworks should be established in order to:.

- **III-G-1-1-** enable the sustainable mobilisation of private or public funds to finance water supply and sanitation networks,
- **III-G-1-2-** facilitate access to credit by decentralised public and private management structures, especially local communities and NGOs, and encourage the development of micro-credits,
- **III-G-1-3-** provide, as needed, the public or private investors with appropriate risk guarantee schemes for the financing of investments,
- **III-G-1-4 -** set up to the extent possible « user-pays » pricing systems that cover direct or indirect costs of the services with the costs billed to users who can afford to pay. Prices must be justified by the quality and reliability of the services provided to the users,
- **III-G-1-5 -** manage, as needed, the transition towards the recovery of, as a minimum, operational maintenance and replacement costs and watershed management costs with, as necessary, an intermediate phase in which these costs could be partly covered by public funds,
- **III-G-1-6 -** take the necessary measures, cross-subsidies in particular, in a transparent manner, to prevent management of services limiting access to water by low-income users,
- **III-G-1-7 -** apply efficiently the « polluter-pays » principle, using economic instruments for environmental purposes that are in proportion with the damage caused to the environment,

- **III-G-1-8 -** take into account costs related to the acquisition of knowledge, surface and ground water protection and development, the preservation and management of ecosystems, river basins, aquifers and the maintaining of wetlands and water flow in watercourses.

O III-G-2 - MOBILISATION OF EXTERNAL RESOURCES

Bi- and multilateral donors should assist countries in the formulation and implementation of their integrated water resources management strategy. Their support to the sector should be consistent with the defined priorities in order to ensure efficient synergy between external assistance and national and local financial resources.

Bi- and multilateral donors should contribute to the implementation of the defined priorities by supporting both structural reforms and projects and by mobilising the financial resources necessary to implement them.

Evidence that existing resources are used optimally will help mobilise additional financial resources from national and international sources, both public and private.

The joint action and co-financing of multilateral and bilateral donors should be emphasised, in order that beneficiary countries obtain maximum effectiveness from external financing, in particular for integrated regional projects.

O III-G-3 - USE OF INNOVATIVE MECHANISMS

Due consideration should be given to more private sector involvement, innovative models for local water resources management such as Build Operate Transfer, and use of market mechanisms, where applicable.

O III-G-4 - MOBILISATION OF LOCAL HUMAN RESOURCES AND KNOWLEDGE STEMMING FROM DIFFERENT CULTURES:

In addition to the modern water policy approaches, it is important to:

- **III-G-4-1-** mobilise local human resources as much as possible;

- **III-G-4-2-** take advantage of the population's diversified know-how, especially in rural and pastoral areas, concerning the detection, collection, conservation, use and recovery of water.

❑ III - H - PRIORITIES FOR OFFICIAL DEVELOPMENT ASSISTANCE

Bi- and multilateral donors should first concentrate concessional financing on enabling activities and programmes intended to improve the enabling environment, in order to meet basic priority needs, building on on-going activities as far as possible.

Among these:

O III-H-1 - MEETING BASIC NEEDS (drinking water supply, sanitation, control of water-related diseases, etc). Rapid action is necessary to reach progressively approved international standards in order to meet quantitative and qualitative basic human needs in rural and underprivileged urban areas. Special attention should be paid to the means of achieving the eradication of water-borne diseases.

Special consideration should be given to gender and equality issues; including programs to improve the status of women and increase their meaningful participation in decision-making.

O III-H-2 - THE ORGANIZATION OF INTEGRATED MONITORING SYSTEMS AND DATABASES to improve information on resources, uses and pollution. Access by professionals and users to that information and documentation, necessary for water management and financing, will be promoted.

O III-H-3 - THE IMPLEMENTATION OF INSTITUTIONAL, ADMINISTRATIVE AND ECONOMIC REFORMS to establish river basin organisations and national or regional regulating authorities; to modernise irrigation or municipal water services; and to improve usage efficiency, demand management and maintenance of facilities.

O III-H-4 - VOCATIONAL AND IN-SERVICE TRAINING of all categories of personnel by creating or modernising specialised technical training centres and training institutes dealing with the administration and management of water services.

O III-H-5 - FACILITATE PUBLIC-PRIVATE PARTNERSHIPS
for the development of general interest infrastructures that are economically justified, ecologically and socially sound and that fit into master plans, at the level of large river basins in particular, and into integrated programmes for priority investment.

O III-H-6 - SUSTAINABLE MANAGEMENT OF WATER-RELATED ECOSYSTEMS, in order to preserve biodiversity and ensure soil and water conservation, through appropriate policies for land use planning, combating desertification, erosion control, forestry management and municipal waste.

o III-H-7 - RESEARCH AND TRAINING
Support for research, training and capacity building in order to facilitate the transfer of technology and increase the efficiency of the technology transferred.

o **III-H-8 - NATURAL DISASTER (FLOOD AND DROUGHTS) PREPAREDNESS**

There is a need to establish or strengthen mechanisms for regional consultations on drought and flood preparedness ; early warning systems and mitigation plans at local and national levels, and regional emergency funds and/or collective insurance programs. At the international level, there is a need to maintain support of these activities following the close of the IDNDR (1999).

o **III-H-9 - EFFICIENCY OF IRRIGATION**

Set up economic incentives for an efficient use of water resources, particularly for the irrigation sector with the objective of increasing the quantity and regularity of food production.

● ANNEX - PROMOTION OF PARTNERSHIP AND DIALOGUE

All public authorities, public and private companies, non-governmental organisations, whether local, national or international, responsible for or in charge of conceiving, designing, approving, implementing, managing, supervising or financing activities, programmes or services in the water sector are invited to engage in a permanent dialogue with all users and beneficiaries. This dialogue requires sharing all relevant information with stakeholders and discussions on objectives and implementation modalities.

Transfer mechanisms of know-how, knowledge, technology as well as all relevant information for improving efficiency and fostering the development of services and activities will be promoted, among others, through institutional or business partnerships.

All actors will support, as appropriate :

- sharing and dissemination of experience gained in practice (projects, programmes and activities, etc),
- information exchange on institutions, problems faced and innovative solutions adopted and on all other activities that may contribute to raising the public and the professional community's awareness of water-related issues and solutions.

Networks built for the above aims should be open to other networks and, as much as possible, to all partners in the water sector. Information shared on these networks should be freely accessible to all.

Final Version

INTERNATIONAL CONFERENCE WATER AND SUSTAINABLE DEVELOPMENT

PARIS – 19/20/21 March 1998

FINAL DECLARATION

We, Ministers and Heads of Delegation meeting in Paris for the International Conference on Water and Sustainable Development, 19 – 21 March 1998,

Convinced that freshwater is as essential to sustainable development as it is to life and that water has social, economic and environmental values that are inter-linked and mutually supportive,

Guided by the conclusions of the United Nations Conference on Environment and Development (Rio 1992), in particular the Rio Declaration and Agenda 21 and its Chapter 18, and of the Special Session of the United Nations General Assembly in June 1997,

Recalling previous deliberations on water by the international community, in particular the conclusions of the meetings at Mar del Plata (1977), New Delhi (1990), Dublin (1992) and Noordwijk (1994),

Noting the ongoing preparatory process to the VIth session of the Commission on Sustainable Development, including the contributions made by the expert group meetings recently held in Harare and Petersberg,

Seriously concerned by a situation in which a quarter of the world's population does not have access to safe drinking water; more than half of mankind lacks adequate sanitation; poor water quality and lack of hygiene are among the primary causes of death and disease; and scarcity of water, flood and drought, poverty, pollution, inadequate treatment of waste and lack of infrastructure pose serious threats to social and economic development, human health, global food security and the environment,

Also concerned that constraints on access to water, in terms of quantity and quality, could become a major limiting factor in sustainable development,

Determined to take advantage of the opportunities to tackle these problems by promoting local and national systems for managing the sustainable use of water resources, based on an integrated approach linking development with protection of the natural environment, participation of all actors and interested parties, the involvement of both men and women, and recognition of the social, economic and environmental value of water,

Underline that

- water resources are essential for satisfying basic human needs, health, energy and food production, and the preservation of ecosystems, as well as for social and economic development;

- the protection of ecosystems is essential for the maintenance and rehabilitation of the natural hydrologic cycle in order to manage freshwater resources in a sustainable manner;

- water is a key natural resource for future prosperity and stability, which should be recognised as a catalyst for regional co-operation;

- it is crucial to improve knowledge and understanding at all levels of water resources in order to develop, manage and protect them better and to use them in a more efficient, equitable and sustainable manner;

- a high priority should be given to strengthening institutions, in particular local institutions, and improving training and awareness of professionals and users alike;

- the development, management, use and protection of water should be :
  - promoted by a partnership between the public and private sectors, thus mobilising good practice and long term financing,
  - based upon a participatory decision-making process open to all users, in particular women, people living in poverty and disadvantaged groups.

  The role of NGOs and other socio-economic partners remains essential.

- international co-operation should play a key role in achieving these objectives, at national, regional and global levels.

Call upon the international community, public authorities at every level and civil society to give priority to providing access for all to safe drinking water and sanitation.

Also call upon the international community, to develop an agreed statement of the principles to be applied in developing and implementing local and national water management systems and international co-operation to support them, taking into consideration the outcome of the Harare Expert Meeting.

Commit ourselves to support the implementation of the following guidelines, where appropriate and in the framework of national and local strategies, taking into account each country's specific situation :

- **Promote the integration of all aspects of the development, management and protection of water resources**, by developing plans which set out to satisfy basic needs and to promote efficient and equitable allocation of water resources, the protection of ecosystems and the maintenance of the hydrological cycle.
  To this end, the creative development and evaluation of a wide range of options and their benefits and risks, together with the ongoing co-ordination of watershed development, management and protection, are essential. Public authorities at every level and civil society should play their part in this process and related decision making.
  Governments have a crucial role to play in creating enabling frameworks for local and national water resource management through legislative, economic, social and environmental measures.
  Shared vision between riparian countries is important for the effective development, management and protection of transboundary water resources.
  International conventions such as the Framework Convention on Climate Change, the Convention on Biological Diversity, the Convention to Combat Desertification[1] and the Ramsar Convention[2] can make a contribution on the integration of their special interests in the sustainable use of water.
  Thinking on approaches to integrated water development, management and protection should be facilitated by all relevant institutions, including the World Water Council, and supported by exchanges of experience through informal networking between stakeholders within the framework of existing institutions.

- **Mobilise adequate financial resources from public and private sectors** and, as an important part of that task, enhance the effective use of available resources.
  To this end provisions for progressive recovery of direct service costs and overheads, while safeguarding low income users, should be encouraged.
  Both the polluter-pays principle should be promoted and user-pays systems should be encouraged, at national and local levels, and measures should be adopted to facilitate private funding in the financing of water and sanitation projects, taking into account the specific conditions in each country and region.

  Official development assistance should complement and focus on programmes designed for creating enabling frameworks, meeting basic needs, sustainable development, management and protection of water, protection of ecosystems and capacity building. Co-operation and co-ordination between bilateral and multilateral donors and recipient States should be strengthened.

In this context, a range of international organisations, including the Global Water Partnership, could have a notable role to play.

- **Improve knowledge, training and information exchange** by encouraging increased transfer of technology and expertise, the development of monitoring and information systems related to water resources and their different uses, and support programmes for vocational and continuous training. In parallel, people living in poverty and disadvantaged groups, indigenous communities, youth, local authorities, leaders of local communities and NGOs should be enabled to become more involved in the decision-making process. Women should be enabled to participate fully in project definition and implementation.

In this spirit, **emphasise** the importance of following up the guidance contained in the Programme of Priority Actions developed by the experts workshops during the Conference, as set up in the annex to this Declaration.

Submit this Programme of Priority Actions to the CSD for consideration at its VIth session during its deliberations on a strategic approach for the sustainable use of freshwater resources.

Suggest that relevant international organisations and institutions follow up the actions derived from the recommendations contained in this Declaration and its annex.

Stress the need to ensure that the problems of achieving sustainable development, management and protection, and equitable use of freshwater resources are kept under review, to improve co-ordination between UN Agencies and Programmes and other international organisations, to ensure periodic consideration within the UN system, in particular the Commission on Sustainable Development, of the proposed priorities of governments for action and to emphasise the role of UNEP in the field of environment.

Emphasise the need for continuous political commitment and broad-based public support to ensure the achievement of sustainable development, management and protection, and equitable use of freshwater resources, and the importance of civil society to support this commitment.

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(1) - United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa

(2) - Convention on Wetlands of International Importance, especially as Waterfowl Habitat